Glenn Ole Hellekjær

# *The Acid Test:*
## *Does Upper Secondary EFL Instruction Effectively Prepare Norwegian Students for the Reading of English Textbooks at Colleges and Universities?*

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A dissertation submitted for the degree of Doctor Artium (Dr. art)

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## Abstract

The present quantitative, descriptive and exploratory study investigates whether, and to what extent, Norwegian upper secondary EFL instruction prepares for the reading of English texts and textbooks in higher education. It uses questionnaires, and a combination of self-assessment items and an academic English reading test (IELTS) to measure English reading proficiency. The samples comprise student respondents from the university and college level as well as senior upper secondary level students from the General Studies branch.

Test scores of the senior upper secondary school respondents from the General Studies branch revealed that two thirds would not manage the level required for admission to universities in English speaking countries. Likewise, test and self-assessment scores of university level respondents indicated that reading problems persisted in higher education, with between 30 and 40 percent of the respondents experiencing difficulties.

A closer analysis revealed that the difficulties experienced by many respondents were due to poor language proficiency, exacerbated by a counterproductive tendency towards careful reading with excessive focus on ascertaining the meaning of unknown words. The respondents who indulged in the extracurricular reading of English or had had Content and Language Integrated Learning courses were among those with the highest scores. Rather unexpectedly, completing the upper secondary level Advanced English Course did not give an advantage. Nor did study experience.

Though the findings in this descriptive and exploratory study need to be confirmed in follow-up studies, they clearly indicate the urgent need for changes in the syllabi and teaching of Norwegian EFL instruction.

**Acknowledgements**

Many years ago, while I was studying History at university, I was struck by all the difficulties my fellow students had reading the English textbooks on their reading lists. Later, when I had become an English teacher in the General Studies branch of upper secondary school I started to understand why they had had so many problems. This lead to my lasting interest in TEFL, and when the Department of Teacher Education and School Development at the University of Oslo, Norway gave me the opportunity to spend four years researching on this topic, it was like a dream come true.

There are many people who have helped me with this project. I would above all like to thank my supervisor, Professor Aud Marit Simensen, and my side-supervisor Professor Svein Lie, of the Department of Teacher Education and School Development, for their interest, encouragement, suggestions, and invaluable comments. I would also like to give a special thanks to Dr. Trond Solhaug at the Department of Teacher Education and School Development for his help developing questionnaires and with the statistical processing; to Professor Torleif Lund at the Department of Special Needs Education for his contribution to the research design; and Assistant Professor Knut Andreas Christophersen of the Department of Political Science for his help with SPSS and statistical processing. The help and support I have been given by Dean Eva L. Björk at the Faculty of Business, Social Sciences and Foreign Languages at Østfold Univeristy College in Halden has also been essential and is also greatly appreciated. I am also grateful to IELTS for allowing me to use one of their Academic Reading Modules.

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# INTRODUCTORY CHAPTER

## *1.1.Introduction*

The present study investigates whether, and to what extent, Norwegian upper secondary EFL instruction prepares for the reading of the English texts and textbooks

in higher education, and attempts to isolate factors that contribute to variation in the students' reading proficiency. It uses a quantitative approach based on the statistical processing and analysis of survey and test results, with student respondents at university and college level[1] as well as from senior upper secondary level classes from the General Studies branch. The findings can serve as a point of departure for future revisions of upper secondary English as a Foreign Language (EFL) syllabi, examinations, and current teaching practices in Norway.

In the following I start with a brief overview of the need for Academic English proficiency in Norwegian higher education (section 1.2) and present recent studies of English proficiency (subsection 1.2.1). Next, I state the research aims (section 1.3), briefly describe the research method (section 1.4), and finally, provide an outline of the thesis (section 1.5).

## *1.2. English in Norwegian higher education*

Norway is a small language community with only 4.5 million inhabitants in a world where English dominates in business, technology, and research. This means that Norwegians working in these sectors need to be highly proficient in this foreign language.

This is the case in higher education as well. A limited market has long made it necessary to put English texts and textbooks on student reading lists unless appropriate Swedish and Danish ones have been available (Dahl, 1998; Hatlevik & Norgård, 2001). However, English texts and textbooks are often preferred even when there are Norwegian, Swedish or Danish alternatives (Dahl, 1998).

There has been some discussion against this reliance on English texts and textbooks (Hertzberg, 1996; Wiggen 1994, 1997). One argument against has been that using Norwegian textbooks eases the transition from secondary to higher education. A second has been that starting a new subject is best done in Norwegian (Hertzberg, 1996). Other issues have been the need to retain or develop Norwegian special terminology, to relate subjects to Norwegian conditions, or to provide textbooks on topics and areas particular to Norway (Dahl, 1998; Egeland, 1989; Wiggen, 1994, 1997).

Efforts to promote the use of Norwegian have also met with some success. In 1989, for instance, a large-scale survey of the availability of, and need for Norwegian

[1] In Norway higher education comprises both universities and colleges. In the following I will use the term university-level for both.

textbooks in beginner courses in higher education was carried out (Egeland, 1989). The findings were used to improve the guidelines for the allocation of government support for Norwegian textbook production. This is done through *Lærebokutvalget for høyere utdanning*, a committee under the auspices of the Norwegian Council for Higher Education.

A few years ago it was claimed that the number of English texts and textbooks in higher education has expanded at the expense of Norwegian (Andreassen, 1998). A subsequent study initiated by the Norwegian Ministry of Education and Research [2] (UFD) found that this was not the case (Hatlevik & Norgård, 2001). This study compared the number of English and Norwegian texts on reading lists at different faculties at a number of institutions of higher education from the 1960s to the present. It turned out that the proportion of English titles on university and college reading lists was considerable, varying from about 65% in the Natural Sciences to about 50% in the Humanities and Social Sciences. Contrary to expectations, the survey showed that the proportion of English texts had declined slightly while the number of Norwegian texts had increased, largely at the expense of the other Scandinavian languages.

Despite this discussion, the necessity of using English textbooks in higher education, particularly in advanced level and specialized courses, has not been contested. Indeed, it would not be possible to translate, or write Norwegian texts for all studies even if this was desired. Therefore, the ability to read and learn from English texts has been and remains a vital study skill, even though lectures and examinations have usually been in Norwegian.

A more recent trend has been the introduction of English-medium courses and programs. These are taught in English, use English texts, but with lecturers and students who are not native speakers. A 1994 survey by the Norwegian Language Council found that these comprised a limited number of courses, the number varying from subject to subject (Norsk Språkråd, 1994). The Council, quite accurately, predicted an increase in the number of English-medium courses and programs in the

[2] The Norwegian Ministry of Education and Research is in Norwegian known as Utdannings og forskningsdepartementet, also referred to as UFD. In the following I will refer to it as UFD.

near future due to international exchange programs, such as the European Union's Erasmus program.

At present a number of factors and initiatives are contributing to an ongoing and accelerating expansion of English-medium programs in Norwegian higher education. One is the multi or bilateral exchange programs with for instance European Union or developing countries. Next, the desire to promote student mobility has coincided with increased competition in student recruitment, a trend facilitated at the European level by the 1999 Bologna Declaration on European higher education. Third, the recognition that efforts to promote student mobility would never involve more than a limited number of students has led to the Internationalization at Home (IaH) initiative (Crowther et al., 2000). Crowther et al. argue for the need to internationalize curricula to prepare students for present and future multiethnic and multilingual workplaces, which means more English-medium programs and an increased emphasis on international topics and intercultural communication. The most important factor, however, is the ongoing Norwegian reform of higher education, known as "The Quality Reform" (UFD, 2002). One of its goals is that all students in higher education are to be offered stays abroad as part of their degrees. It also puts more emphasis on exchange programs at the Nordic, European, and International levels, and on efforts to increase the number of foreign students coming to Norway. The reform explicitly mentions the need to expand the number of courses and programs taught in English to realize these goals.

Reading lists with English texts and textbooks have long made the ability to read English a crucial skill. The increasing number of international exchange and English-medium programs now require advanced listening and writing skills as well. Since Norwegian institutions of higher education do not offer preparatory English for Academic Purposes (EAP) programs, this presupposes that EFL instruction in upper secondary school develops the required levels of proficiency. I will argue below that this is a questionable assumption.

### 1.2.1. Recent studies of English proficiency

Practical teaching experience first led me to question whether Norwegian EFL instruction was inculcating many students with a counterproductive, slow and careful reading of English texts (Hellekjær, 1992). In a later study I also found reading

difficulties (Hellekjær, 1998). The most serious was a tendency towards excessively careful reading in English, which turned out to be a problem for the implementation of Content and Language Integrated (CLIL) instruction in Norwegian upper secondary school (Hellekjær, 1996).

In fact, my experience with reading difficulties in CLIL instruction led to my first investigation of Norwegian student reading proficiency in English. This survey was carried out in November 1996 and comprised 145 first year Political and Computer Science student respondents at Østfold University College, Halden (Hellekjær, 1998). The respondents assessed their reading proficiency on a five-point scale and commented on the difficulties they had encountered when reading English textbooks.[3]

The survey revealed that many students, the Political Science students in particular, had considerable problems reading their English textbooks. More than two thirds of these students considered their textbooks either difficult or very difficult, and comments in the questionnaires revealed a great deal of frustration, even desperation. The answers of the Computer Science students, on the other hand, indicated that they had fewer problems. One explanation was the textbooks used. Closer examination showed that Political Science textbooks were almost exclusively continuous text, with only an occasional diagram or model. The language also seemed quite complex, both lexically and syntactically. In comparison, the Computer Science textbooks not only seemed less complex with regard to vocabulary and syntax, they also comprised numerous illustrations with explanatory captions, made extensive use of diagrams and illustrations, and included lists of definitions and explanations of key concepts. These factors are examples of what Hauptman (2000) terms iconic and noniconic signaling. Signaling is the use of visual and linguistic elements "that increase redundancy for the reader and that are sufficiently abstract, general, and inclusive to give the reader an overview of the content and structure of the text" (Hauptman, 2000, p. 626). Hauptman argues that these elements contribute to making texts in a foreign language easier to read by increasing redundancy (Hauptman, 2000).[4] This was apparently the case with the Computer Science textbooks.

[3] See the discussion of self-assessment in subsections 4.3.2 and 4.5.2.

[4] Iconic signaling is here understood as the use of graphic cues or organizers such as charts, pictures and diagrams. Noniconic signaling is the use of visually evident information in the text such as titles, subtitles, numbering, boldfacing etc.

An additional factor explaining the difference between the groups was revealed in interviews with Computer Science students. It became clear that their first year program bore more resemblance to a vocational rather than an academic course with regard to the learning situation. The Computer Science students used their lecture notes and textbooks, the latter almost exclusively in English, mostly for reference purposes while engaged in extensive, practical, computer-based projects. For the Political Science students, on the other hand, textbooks functioned as the main source of information along with lectures. Furthermore, their learning process was not supported by practical project work.

One of the conclusions from the survey reported on in 1998 is the importance of taking readability into account when selecting English texts and textbooks for Norwegian students. Secondly, despite differences in learning situations and the lexical and syntactic complexity of the textbooks, it also showed there was considerable individual variation between students with regard to academic English reading proficiency. In any case, that so many of the respondents taking part in this pilot survey experienced considerable difficulties reading English textbooks raises the question of possible inadequacies in upper secondary EFL instruction. At the time it also indicated the need for further research in this area.

A second study critical of upper secondary EFL instruction is Lehmann's (1999) PhD thesis, *Literacy and the Tertiary Student: Why has the Communicative Approach Failed?* Lehmann takes up the problem of upper secondary students being inadequately prepared for higher education, in her case with regard to English writing skills. Her point of departure was an English translation exam in which many among a group of 182 Norwegian undergraduate-level students did poorly. Their actual writing and translation skills also stood in marked contrast to the students' opinions about their own proficiency. In fact, this was the case for those with good as well as poor English grades from upper secondary school. Lehmann blames Communicative Language Teaching (CLT) and its alleged focus on oral proficiency at the expense of writing and grammar instruction for this situation.

As will be discussed in section 2.4, there is reason to question Lehmann's conclusion about CLT. It is doubtful that CLT was implemented in lower and upper secondary EFL instruction of her test population to the extent that it can explain her findings. These could just as well be attributed to a general neglect of writing and/or poor writing pedagogy. In fact, Lehmann's findings on the intrusion of oral language

and syntax into student writing offer an alternative interpretation. This would be that the students had not been exposed to sufficient linguistic input through reading to develop adequate levels of language proficiency and knowledge of written discourse (see for instance Krashen, 1981,1982). The validity of Lehmann's study and her conclusions, however, is an issue that falls outside the scope of this study.

Unfortunately, Lehmann's thesis did not lead to serious discussion of the weaknesses in the Norwegian EFL instruction she describes. Nor did her suggestion that Norwegian institutions of higher education should offer EAP modules to remedy the low levels of English proficiency attract the attention it deserved. At present the increasing number of English-medium programs in higher education has made this an even more pressing issue. This brings us to the next study.

In a recent survey of English-medium programs at Nordic colleges and universities Hellekjær & Westergaard (2003) also found that insufficient student language proficiency was a mounting problem. The survey took place in the fall of 2000 and spring of 2001. Questionnaires were sent by mail or e-mail to a number of Nordic universities, two schools of Economics and Business, and one polytechnic. They were addressed to department heads or program coordinators, and 52 forms representing 58 English Medium/CLIL programs were returned. Twenty questionnaires were returned from Norway, 10 from Denmark, 12 from Sweden and 10 from Finland. The results for student language proficiency showed that despite individual variation, a considerable percentage of students had problems. These involved lecture comprehension, reading, taking part in discussions, making oral presentations, and writing in general as well as for examinations. Furthermore, the extent of these problems increased markedly when the number of programs expanded beyond well-established Masters programs for limited numbers of foreign students to include undergraduate level courses and domestic students. Hellekjær & Westergaard (2003) argue:

> It is probable that the undergraduate programs in the Scandinavian countries [compared to masters level programs] have less academically advanced students taught in larger groups. In these programs, when considered separately, the attested language problems are no longer insignificant. This is an important finding that institutions should be aware of when expansion of programs taught in English is planned. (p. 77).

These are similar to the findings in two recent Finnish surveys, though these, in addition to mentioning the need to improve language proficiency, also indicate the importance of developing student study skills (Räsänen, 2000; Tella, Räsänen & Vähäpassi, 1999). How applicable these findings are for Norway remains to be seen, since few institutions here have yet to offer English-medium programs at undergraduate level. Those in Hellekjær & Westergaard's (2003) survey who did so were primarily Swedish and Finnish. In the light of Lehmann's (1999) findings, however, it might be somewhat optimistic to assume that Norwegian students are any better than for instance Swedish students with regard to English proficiency. Furthermore, a recent European survey of the English proficiency of 16-year-olds indicates roughly comparable levels in the Nordic countries (Bonnet, 2004; Ibsen, 2004).

This comparative survey comprised representative samples of Norwegian, Danish, French, Finnish, Dutch, German and Spanish 16-year-olds, and gives information on how the English proficiency of Norwegian students compares with their peers in neighboring countries (Ibsen, 2004; Bonnet, 2004). The assessment test used comprised 75 items testing oral and written comprehension, linguistic knowledge, and written comprehension along with a students' questionnaire. The level of difficulty was comparable to the B1 level of the Common European Framework (Council of Europe, 2001). In addition to the main survey the teachers of the classes selected to take part in the survey were also asked to fill in a questionnaire.

Comparison of the mean test scores shows that the respondents from Norway and Sweden received the highest scores, closely followed by those from Finland, Denmark, and the Netherlands. For the respondents from Spain and France the scores were considerably lower (see Ibsen, 2004, pp. 17-21). The respondents from all countries scored highest on the items for written comprehension, or reading, with Swedish students getting the highest scores, closely followed by the Norwegians in second place. Interestingly, the Norwegian respondents had the highest standard deviation in their scores, in particular for reading comprehension, indicating a large spread in performance. Bonnet (2004) puts this as follows:

> Norwegian students score high on the European test, but results show a relatively large standard deviation and the distribution of results in each

> classroom is also considerable. The between-school part of the variance is about 13%, a relatively low value in an international perspective. Combined with the rather large overall spread this means that there is a pronounced spread of English proficiency within the classrooms. The Norwegian compulsory school system has as its main goal to provide equal conditions for all students and even out social differences. The data reveals a tremendous challenge for Norwegian teachers of English (p. 147).

Furthermore, Ibsen (2004, p. 35) mentions that this in-class variation, in particular for English reading proficiency, reflects the findings for Norwegian reading proficiency in a recent OECD/PISA survey (see Lie, Kjærnsli, Roe, & Turmoe, 2001).

Using a survey of 16-year-olds to compare the levels of English proficiency at university level in different countries is fraught with uncertainty. Above all, the quality and emphasis placed on upper secondary EFL instruction in the respective countries may increase differences between countries. Nevertheless, with this reservation in mind, the results of this comparative survey indicate that the English proficiency of Norwegian university levelstudents is roughly comparable to those of their peers in other Nordic countries.

## *1.3. Research questions and aims*

The studies presented above, when seen together, all indicate that many Norwegian students do not necessarily have the receptive or productive English proficiency needed for Norwegian higher education. They also suggest that students in higher education experience problems, perhaps even fail exams, due to inadequate English proficiency. In turn, this means that the assumption that Norwegian upper secondary EFL instruction effectively prepares students for higher education is an issue worth further investigation, as is done in the present study.

In the present study the investigation is limited to the question of English reading proficiency needed to master English texts and textbooks in higher education.[5] Its

[5] As will be discussed in more detail in Chapter 3, section 3.7, reading is here understood as more than simply decoding the written words in the text. It is the active creation of meaning in an interactive process between information in the text on the one hand, and the knowledge of the reader on the other (Bråten, 1997).

mail goal is to ascertain whether, and to what extent, Norwegian students in higher education have problems reading the English texts and textbooks on their reading lists. These findings are compared with English reading proficiency of senior, upper secondary level students from the General Studies branch. Second, it attempts to ascertain whether any reading problems are due to general reading problems, that is to say in Norwegian as well as English, or are due to language problems and therefore exclusive to the reading of English. Third, it tries to elicit information on the nature of any reading difficulties, unknown words in particular. Fourth, the present study examines a number of factors expected to covary with English reading proficiency. These are:

- Study experience
- Upper secondary EFL course choice
- Upper secondary CLIL courses
- Reading habits
- English grades
- Interest for English as a subject

Fifth, it compares the scores of upper secondary and university level respondents in order to examine the transition between upper secondary and higher education. Finally, in the discussion, these findings will be used to discuss possible revisions of upper secondary EFL syllabi and examinations. They are also used to suggest areas for further research.

## *1.4. Research method*

The research design and methods used in this exploratory study are presented in greater detail in Chapter 4. To give a brief outline, this study uses a quantitative approach with statistical processing of surveys and results of reading tests. The respondents are Norwegian university and college students who have English texts on their reading lists as well as senior upper secondary school students. The latter are from the General Studies branch, which qualifies for higher education.

The dependent variable in the study, reading proficiency, is measured with a combination of self-assessment items and the Academic English Reading Module

developed by the International English Language Testing System (IELTS, http://www.ielts.org/). The questionnaires used include items on background variables such as study experience, first language, reading habits, and extended stays abroad. There are also items on educational background, for instance on upper secondary English courses taken, grades obtained, and on other aspects of upper secondary EFL instruction.

For reasons discussed in Chapter 4, section 4.6, the samples in this study are not representative, meaning that they are not selected at random from the reference population. Instead they are convenience samples selected according to availability. Nevertheless, I will argue that they provide a useful picture of trends concerning reading proficiency in the student population.

## *1.5. Outline of the thesis*

The present thesis comprises seven chapters. This introductory chapter, Chapter 1, provides the rationale for the study. Chapter 2, "EFL Instruction and Syllabi", provides an overview of Norwegian EFL instruction and syllabi with particular focus on goals with regard to reading proficiency, required reading, and how reading is tested in examinations. Next, Chapter 3, "Theory", provides a general overview of reading in both a first and foreign language, and defines the reading construct to be tested. Chapter 4, "Method", comprises sections on research design (section 4.1), test design and construct validity (section 4.2), the reference population, samples, and external validity (section 4.3), and on methods and statistical conclusion validity (section 4.4). The last section (section 4.5) concludes with a summary and a discussion of overall reliability and validity. Chapter 5, "Findings", comprises six sections. After the introduction to the chapter (section 5.1), it presents and analyzes the data from the two pilot surveys (sections 5.2 and 5.5), the two main surveys (sections 5.3 and 5.6), and a survey and test used to validate the self-assessment items (section 5.4). Chapter 6, "Summative analysis and Discussion", starts with a summative analysis of key findings across the different surveys and samples (section 6.1), it returns briefly to questions of reliability and validity before discussing the findings (section 6.2), and continues with a discussion of these (section 6.3). Chapter 7, "Conclusion", starts by summing up the findings in relation to this study's aims and

goals (section 7.1), suggests further avenues of investigation (section 7.2), and makes recommendations for changes in EFL syllabi and teaching (section 7.3).

# 2. NORWEGIAN EFL INSTRUCTION AND SYLLABI

## *2.1. Introduction*

In Norway, upper secondary school qualifies for higher education, and students can apply to higher education on the basis of grades from continuous assessment and national examinations. To be more precise, it is students from the General Studies branch (roughly comparable to a British 6th Form College) and those from the vocational branches that complete a one-year Supplementary Course who qualify. Although some faculties require certain combinations of subjects, such as advanced elective courses in Mathematics and Physics to study Medicine, the general rule has been that that if applicants have qualified for higher education "studiekompetanse", they can apply for most studies. Until 1996 the two main routes to qualify were

completing the General Studies branch of upper secondary school, or the Business College branch. Following the 1994 Curriculum for Upper Secondary Education, also known as Reform 94 (R94), students with vocational backgrounds could also apply if they completed the one-year Supplementary Course to meet minimum requirements with regard to Norwegian, Mathematics, Social Studies, English, Natural Science, and Modern History.[6] The majority of applicants for higher education will, however, have a more comprehensive academic background from the General Studies branch.

This means that what the Norwegian Ministry of Research and Education (UFD) defines as the minimum qualifications for higher education is the minimum requirement for admittance to most studies. This does not imply that these requirements reflect what is actually needed to succeed in higher education, for instance on the basis of a needs analysis, an issue that will not be discussed in more detail here. In the following, however, I focus on the subject of English as a Foreign Language (EFL) as preparation for higher education. This is further limited to the question of English reading proficiency as specified by the EFL syllabi and tested by the examinations at both the lower and upper secondary levels. Reference is also made to teaching practices.

After this introduction, in section 2.2 I examine Norwegian EFL syllabi with regard to how the teaching of reading proficiency is specified by the syllabi and tested by the examinations. I start with the lower-secondary level (subsections 2.2.1 - 2.2.3). Next come the upper secondary levels, where I begin with the 1989-1996 Veierød English Syllabus (hereafter referred to as Veierød), and continue with the R94 EFL syllabi (subsections 2.2.4 - 2.2.7). In section 2.3 this is followed by "Other Aspects of EFL Instruction", namely Internet and Communication Technologies (ICT) and Content and Language Integrated learning (CLIL). The chapter ends with a discussion of the findings in section 2.4, and concludes with section 2.5.

## *2.2. EFL syllabi and reading*

[6] See the circular letter, *Rundskriv F-021-97*, retrieved January 13, 2003, from the Norwegian Ministry of Research and Education Web site: http://www.odin.dep.no/ufd/norsk/regelverk/rundskriv/014005-991161/index-dok000-b-n-a.html

School curricula[7] in Norway are developed at the initiative of the educational authorities. The 1939 Curriculum Guidelines (*Normalplanen av 1939 for byfolkeskolen*) initiated a period of strong political control with close attention to detail and content that has lasted to the present. In fact, the current R94 curriculum for Norwegian upper secondary school was issued as a legal directive to make it binding for teachers and school-owners. Present-day Norwegian curricula can therefore be defined as "public instructions and guidelines on school responsibilities and content, with a general framework and curriculum directives needed for the supervision of school activities" (Sivesind, 2002, p. 53, my translation).

What a curriculum specifies and what is actually put into practice can be two different things. Sivesind & Bachmann (2002, p. 30) claim that curricula do not necessarily influence schools and teaching in a direct, top-down manner. They distinguish between curricula as direct and indirect forms of guidance or control. The direct influence is the extent to which teachers use the curriculum and the syllabus of the subject in question to plan and reflect on their teaching. The indirect influence is the influence on teachers and teaching through other channels. Examples of the latter are examinations, teaching materials, framework conditions, didactic traditions, and in-service teacher education. In the following I will discuss both the direct and indirect influence of the EFL syllabus.

An example of such an indirect effect would be the role of textbooks in determining the content and progression of English instruction. A recent survey of 65 Norwegian lower secondary English teachers reveals that 98% of the teachers rely heavily on the English textbook (Ibsen & Hellekjær, 2003). This means it is primarily the textbook authors' interpretation of the English syllabus that is put into practice, not that of the teachers. Another example of an indirect effect would be the influence of examinations on teaching, known as teaching toward the test or the "washback effect" (Brown, 1993, p. 261; Davies, 1977, p. 32). In fact, the extent to which examinations reinforce or do not reinforce the syllabus can determine the extent of its implementation. This is why the Directorate for Primary and Secondary Education[8] currently puts a lot of effort into ensuring that examinations for the 10-year

[7] A curriculum normally specifies the overall objectives of a complete program, and includes syllabuses describing the different courses in greater detail.
[8] Formerly known as the Norwegian Board of Education.

compulsory school and upper secondary level clearly reflect the curriculum guidelines.

For the development of reading proficiency, a crucial factor is of course classroom practice. Urquhart & Weir (1998) claim that classroom instruction as often as not fosters a careful reading strategy[9] focusing on extracting perfect comprehension.

> Classroom reading becomes almost exclusively 'intensive' reading . . . , and if classroom tasks have any influence on students' behaviour outside the classroom, this may well result in slow, laborious reading when this is not, in fact, necessary (p. 87).

They go on to claim that "the reading needs of students, and hence the teaching and testing of reading, require a wider range of reading behaviour. . . such as skimming, search reading and scanning" (Urquhart & Weir, 1998, p. 101). This means that if varied reading strategies are to be developed in the EFL classroom, this will not only require explicit syllabus targets for reading and reading development. It will also be necessary to specify enough reading to force classroom reading activities beyond the limitations of the traditional careful reading of textbook texts. Whether examinations support these requirements will also be important.

In the following I therefore start with the direct requirements, by examining what Norwegian EFL syllabi require with regard to the development of reading proficiency. Next, I will look at the required minimums for reading; that is to say if the requirements are large enough to promote other ways of reading than just the careful reading Urquhart & Weir (1998) are critical of. Third, I will investigate how examination requirements indirectly support, or do not support, syllabus goals with regard to reading. Other sources of indirect influence, such as English textbooks, teacher education in English, available resources and so on are considered less important and are therefore not included in the discussion. Although upper secondary English instruction plays the main role in preparing for higher education, I start with the lower-secondary level syllabi before concentrating on the upper secondary level.

[9] With regard to reading, a strategy is here defined as "how a student chooses to tackle a specific learning task in the light of its perceived demands" (Urquhart & Weir, 1998, p. 100).

This is because teaching in compulsory school provides a point of departure for instruction at the upper secondary level.

One area of difficulty for the following presentation should be mentioned before starting. This concerns how to refer to and cite past and current Norwegian curricula and syllabi, of which only the more recent have been translated into English. In the following overview I therefore consistently refer to the Norwegian versions, but use my own translations into English.

### 2.2.1. English in the 9-year compulsory school (M87)

The two most recent curriculum guidelines for primary and lower secondary school are the 1987 Curriculum for Primary and Lower Secondary Education (*Mønsterplan for grunnskolen av 1987*), also known as M87, and the 1997 Curriculum for the 10-year compulsory school (*Læreplanverket for den 10 årige grunnskolen L97*), also known as L97. The majority of the respondents in the surveys and tests presented in Chapter 5 were taught according to the M87 curriculum guidelines. In the following presentation I start with a look at M87 before continuing to L97.

**M87**

According to M87, English instruction was to start in grade 4 and continue to grade 9, the final year of the 9-year compulsory school.

M87 was the first Norwegian curriculum to show the influence of CLT. It clearly specified the importance of using the language for communication, particularly oral, and encouraged the use of communicative activities and tasks. It also detailed a selection of language functions. M87 also revealed the influence of for instance Stephen Krashen's (1981, 1982) ideas emphasizing language learning through meaningful input, which requires that students should "be exposed to English through authentic texts as early as possible" (*Mønsterplan for grunnskolen av 1987*, p. 210, my translation). For reading it also states that "the students should be trained in the independent reading of continuous texts, for pleasure, to grasp the texts as a whole, to find specific information, to make note of unknown words and expressions etc." (p. 211, my translation). It also lists specific text types, aural and visual, adapted and authentic printed texts, student texts, and computer programs and texts that were to be

used at different levels. However, there was no mention of the number of texts or pages to be read, or of levels of difficulty. In contrast, the list of grammar items to be learnt is quite specific and detailed, but by no means as detailed as in its predecessor, *Mønsterplan for grunnskolen av 1974*, M74.

While M87 required the reading of a variety of texts, the national examinations for 9th grade students were not designed to foster different ways of reading. Basically, they relied on the traditional comprehension questions to short texts, supplemented with cloze tests and tasks where students were to underline key items, fill in items in graphs or tables, or answer multiple-choice questions.

### 2.2.2. English in the 10-year compulsory school (L97)

Three structural changes of relevance for English as a school subject accompanied the implementation of L97.[10] First, compulsory school was expanded by a tenth year to include 6-year-olds. Second, English instruction was to start in first grade, that is to say at age six. Third, the examination format was changed: students are now given 36 hours to prepare for the written examination, using a booklet of relevant literary and factual texts. Below I present the main changes from M87 to L97 with regard to English, with the focus on grades 8, 9, and 10.

Klette (2002, p.14) describes L97 as a curriculum that combines stated objectives with detailed requirements on content, classroom activities, and progression. In practice, L97 further elaborates on the emphasis M87 puts on using English for communication, and on exposing students to a wide variety of authentic texts. What is new in L97 is the much clearer focus on writing; students are to learn to produce a wide variety of written text types. In addition to the traditional, sentence-level grammar, students are to be taught about the textual level as well. To give an example from L97, the 8th grade syllabus specifies that students are to be introduced to how texts are structured. There is no mention of reading strategies, but L97 specifies that students in the 8th, 9th, and 10th grades are to read and be able to discuss at least one

[10] None of the respondents in this study were taught according to the L97 curriculum in elementary school. This is because the first students taught according to L97 would have started higher education after the fall of 2002. Nevertheless, it is included here since it gives information on current trends in Norwegian EFL instruction, and because of its effect on instruction in upper secondary school.

novel or easy reader per year in addition to a short story. This is in addition to a variety of other texts. Furthermore, L97 attempts to set a level of difficulty by giving examples of authentic texts that could be used. To use the 10th grade as an example, it suggests working with texts by authors such as John Steinbeck, Charlotte Brontë, Lewis Carrol, Sir Arthur Conan Doyle and Agatha Christie. While some of the examples do seem somewhat questionable (for instance reading *Jane Eyre* in the original language seems rather ambitious at this level), many students should have little trouble with Agatha Christie. It should be kept in mind, though, that these texts and authors are given as examples only. L97 is clear in allowing teachers and students to select texts according to interest and ability.

The introduction of the new 10th grade examinations might have had some impact on the teaching of reading proficiency. The first of these examinations was held in the spring of 2000, and, as mentioned above, the students were given 36 hours of preparation time. Preparation is based upon a 15 to 20-page booklet provided by the Directorate for Primary and Secondary Education with a number of literary and factual texts at varying levels of difficulty. For instance, the 2000 spring examination booklet contained, among other texts, an adapted version of J. H. Clarke's short story "The Boy Who Painted Christ Black." Those responsible at the Directorate for Primary and Secondary Education considered it to be a linguistically and conceptually demanding text. This may be the reason the text has also been used in *Victory*, a Norwegian textbook for the second year of the Advanced English Course in upper secondary (Pihl Clausen, Hestenes & Ro, 1993). The 2000 spring examination was followed up by a survey of a representative sample of the students who sat for this examination. To the surprise of those involved at the Directorate for Primary and Secondary Education, only 1.7% of the students surveyed disagreed with the statement – "the contents of the booklet were easy to understand and learn" (Korsvold, 2004, my translation).

There are several possible reasons for students' and teachers' apparent acceptance of the new examination format and the quite demanding texts. One might be the 36-hour preparation time during which the students can work together, consult the teacher, and use the Internet and other sources. Alternatively, L97 might already have engendered changes in the teaching of reading in the EFL class. Norwegian students' increasing exposure to English outside school can also be a contributing

factor (Ibsen, 2004; Lund, 2002). This is an interesting research topic worth investigating in a separate study.

### 2.2.3. English at the lower secondary level - summing up

To sum up, there is a clear development from M87 to L97 with regard to the requirements to reading and the supporting examination formats. Though M87 focused on students being exposed to authentic texts as early as possible, neither the number of pages or texts or the levels of difficulty were specified. Furthermore, M87 examination requirements and formats did not require teachers to put increased focus on reading or change the way they worked with texts. Thus there was little or no pressure to read anything except the English textbooks, or to work with different ways of reading.

It remains to be seen whether the more ambitious and explicit requirements of L97 will affect the teaching of reading in EFL instruction, in particular the tendency among teachers to rely on textbooks exclusively. In fact, there is reason to question whether it has had any affect at all so far (Ibsen & Hellekjær, 2003). For the present study, however, this is a moot point – as already mentioned – none of the respondents have been taught according to L97.

### 2.2.4. English at the upper secondary school level

As discussed in subsection 1.2 above, upper secondary English instruction in the three-year General Studies branch has a clear role in preparing for higher education. The majority of the respondents in this study followed English in upper secondary according to the 1989 –1996 Veierød and the R94 Curricula. In the following I therefore examine these two syllabi with a specific focus on reading, together with the number of texts required and examination requirements. Each section starts with a general overview of the course structure for English. Then I begin with the compulsory, first-year, five-hour-per-week Foundation Course, continue with the elective second and third year Advanced English courses, and end by examining other compulsory or elective courses.

### 2.2.5. The 1989 –1996 Veierød English syllabus

During the Veierød period there were two school branches qualifying for higher education (*studiekompetanse*). These were the General Studies branch and the Business College branch. In addition, students completing the General Studies branch had the option of fourth year, business-oriented programs such as a One Year Course for Secretaries with a five-lessons-per-week Business English course. Such fourth year courses will not be included in the following discussion as they involved a limited number of students only.

The structure of the English courses in the General Studies branch and the Business College branch is displayed in Table 2.1 below.

Table 2.1. Overview of English courses on the General Studies branch according to the 1988-1996 Veierød syllabus, and Business College branch syllabus (Handel og kontor). Compulsory courses are in bold type. Course codes indicate the examination number.

<table>
<tr><th>Level</th><th colspan="2">General Studies branch</th><th>Business College branch</th></tr>
<tr><td>Grade 1</td><td colspan="2">English Foundation Course<br>5 lessons-per-week (AF 2050)</td><td>English for Business<br>3 lessons-per-week<br>(HK 1060)</td></tr>
<tr><td>Grade 2</td><td>English 1 Course<br>5 lessons-per-week<br>(Elective)</td><td rowspan="2">3 lessons-per-week English course<br>• General Oral English<br>• Natural Sciences English<br>• Economic English (AF 2044)<br>• Business English (5 lessons-per-week) (AF 2055)</td><td>English for Business<br>3 or 5 lessons-per-week<br>(HK 3410 or 3420)</td></tr>
<tr><td>Grade 3</td><td>↓ English 2 Course<br>Five lessons-per-week (AF 2057)<br>(Elective)</td><td>English for Business<br>3 lessons-per-week<br>(HK 5730)</td></tr>
</table>

*I refer to English 1 and English 2 as the Advanced English Course.

The Business College English courses were compulsory during all three years, with three lessons-per-week.[11] In practice these functioned as separate modules. Each module attempted to combine a vocationally oriented Business and Economic English component with General English. There were quite moderate requirements to the latter, in particular with regard to reading. Though the Business College branch did qualify for higher education, it was first and foremost considered a vocational branch, and had far fewer students than the General Studies branch. It will therefore not be examined in further detail here.

For the General Studies branch the English courses described in the Veierød syllabus present a rather complex picture. All students had to complete the first-year, five-lessons-per-week Foundation Course. Those students who did not opt for the Advanced English Courses (English 1 & 2) over one or two years were required to select a three-lessons-per-week English Course, the Oral English, English for the Natural Sciences, Economic English, or the five-lessons-per-week Business English Course. The two latter courses had written examinations. However, complaints about crowded timetables led the Ministry to relax this requirement, first in circular letter F-61/89 and then in the 1992 revised syllabus. Students specializing in the Natural Sciences with no time left over for other subjects as well as those selecting an additional course in another foreign language were exempted from this requirement (*Læreplan for den videregående skole. Del 3a Studieretning for allmenne fag 1992*, 1992, p.8). A 1990 survey found that as many as 40% of the Natural Science students made use of this option (Ibsen, & Lie, 1990 p. 77). In practice this made the English Foundation Course the minimum requirement for higher education, as is the case at present.

The Veierød Curriculum Guidelines had separate specifications for the general, compulsory subjects (*Læreplan for den videregående skole. Del 2 Felles allmenne fag 1991*), and for elective subjects (*Læreplan for den videregående skole. Del 3a Studieretning for allmenne fag*, 1992). The syllabi started by specifying the structure and the number of teaching hours in the different courses. English was designated an A-language, the first foreign language, whereas German or French were designated B or C languages. For both A, B, and C languages content was specified in detail for each language level with the number of pages to be read and topics to be

[11] The only exception was the second year of the Office and Administration line (Kontor og administrasjonslinja) when students had five lessons-per-week.

covered. The syllabus leaves room for a great deal of interpretation, and emphasizes the need to adjust teaching according to the level of the language courses being taught.

**The compulsory English Foundation Course**

The syllabus for this course leaves no doubt about the influence of CLT, stating that "a long-term goal in the development of practical language skills of the students is communicative competence" (*Læreplan for den videregående skole. Del 2 Felles allmenne fag*, 1991, point 2.1, my translation). The syllabus emphasized the importance of language functions. In connection with writing and oral tasks and grammar it specified that "it is necessary to choose language functions that are useful and acceptable in different communication situations" (point 4.2, my translation). On the other hand, the Veierød syllabus lacked the clear emphasis that M87 put on exposing students to English through authentic texts.

With regard to reading, the syllabus specified in the overall objectives that students should be able to " read and understand texts at an appropriate level of difficulty" (point 2, my translation). Little more was said about reading in the section on tasks, unlike for writing and speaking. Instead it is mentioned indirectly in Point 4.5 "Study Skills", which states that instruction in study skills should foster not only learner autonomy, but "show students how they can get a general overview of a given material, find the main points, distinguish between what is relevant and what is not, and be able to review and summarize" (point 4.5, my translation).

In the section for English specifying content the specified amount of reading over one year is 160 pages, half of it in connection with the following themes:

> 1. Education, Work and Leisure
>
> 2. Crime and Social Problems (abuse of alcohol, drugs, unemployment, housing problems, loneliness etc.)
>
> 3. Travelling in the English–speaking world (aspects of geography and history)
>
> 4. The World We Live In (political and environmental aspects)
>
> (point 3.2, my translation)

These topics were to be covered through both literary and factual texts. If a student was selected for an oral examination he or she would be questioned about the texts on their reading lists covering these topics.

As already mentioned, the Veierød syllabus allowed a great deal of leeway in the planning and teaching of the Foundation Course. In practice, since the written examinations tested general proficiency only, the requirements with regard to pages read and topics to be covered for a possible oral exam were the only guidelines. The written examinations comprised a short text with comprehension questions, short translations from English to Norwegian and vice versa, and an essay.

In the upper secondary school community in which I worked during this period, my experience was that teachers hardly bothered to read the syllabi and generally taught to prepare students for the final examinations. There was little pressure to make English instruction communicative, or to work systematically to develop reading and study skills, since these aspects were not tested in the examinations. Ordinarily, this would not have been a problem since students at the outset were required go on to a 3 lessons-per-week General English Course, or the comparable English for the Natural Sciences or Economics courses, which will be discussed in further detail below. Alternatively, they could select the Advanced English Courses. As mentioned above, the requirement of an additional English course was subsequently relaxed. This made the Foundation Course the de-facto minimum in English required for higher education. However, this was not followed up in either the syllabus requirements or the assessment.

**The Advanced English Course**

In contrast to the topic-based Foundation Course, the elective Advanced English Course (English 1 and 2) combined a set list of topics with a number of literary texts specified by the Ministry. This syllabus and the reasonably predictable examinations were popular among both teachers and students, and it ushered in what has been called "a golden era of literature teaching in upper secondary schools" (Ibsen & Wiland, 2000, p. 82).

This syllabus prescribed a number of topics from UK and US society and history along with the reading of one novel or play for the course, either Bernard Maclaverty's *Cal*, Arthur Salinger's *Death of a Salesmen*, or George Orwell's *Animal Farm*. In addition to the novel or play there were ten set texts, including "The Killers"

by Ernest Hemingway, Sherwood Anderson's "Brother Death", and James Thurber's "The Secret Life of Walter Mitty" (*Læreplan for den videregående skole. Del 3a Studieretning for allmenne fag*, 1992). In the written examinations students were to answer two questions on the topics from US or UK society, and then a literary essay about one or more of the set texts. All in all, the required reading, on which the students could be tested in an oral examination, was about 500 pages.

It is interesting to note that working with about 500 pages over two years in a five-lessons-per-week course means reading about 1.3 pages per lesson. Of course, the Veierød syllabus made it clear that these were minimum requirements, and that a teacher was free to have the class read more. However, despite its popularity among teachers and the selection of high quality literary texts, the question is to what extent the teaching of this fairly limited number of set texts and topics contributed to the development of varied reading skills and strategies.

**Other courses**

Students could choose between several other courses in the Veierød syllabus. One was the three-lessons-per-week Oral English Course, another the English for the Natural Sciences, and last the three or five lesson English for Economics or Business. The original intention was that students who did not wish to take the Advanced English course were to choose one of these alternatives (*Læreplan for den videregående skole. Del 3a Studieretning for allmenne fag*, 1992, pp. 227-238). Their role in preparing for reading in higher education was also recognized in some of the course syllabi, but not in others. It is most clearly stated in the comments to the objectives for the Business and Economics English course: "English instruction at the advanced levels of upper secondary has as one of its goals to prepare students for the reading of specialized English texts and for teaching in English at college and university" (point 2.1, my translation). The General English course was somewhat less specific: "An important part of the goal is to encourage students to continue with the subject so they develop the language proficiency needed to read subject specific literature in English" (point 2.1, my translation). How students were to continue developing their language proficiency is another matter. Rather inconsistently, students were not allowed to continue from General English to the Advanced English course or to English for the Natural Sciences, only to the Economic English alternatives.

Furthermore, whether the goal of preparing for further studies was clearly stated or only implied for these courses (with the exception of point 5.5 on study skills in the chapter on Foreign Languages) the requirements for reading were by no means ambitious (*Læreplan for den videregående skole. Del 3a Studieretning for allmenne fag*, 1992, pp. 210-226). Required reading varied from 100 to 140 pages, while about 30 to 40 pages were to be read intensively, the rest extensively. On the other hand, the syllabi left ample room for experimentation and additional reading. For instance, in a 1994 article (Hellekjær, 1994b), I presented several examples of how factual and literary texts, both short stories and novels, could be used to work with topics relevant for the English in the Natural Sciences course.

### 2.2.6. The Reform 1994 Curriculum for upper secondary education

R94 represented a comprehensive structural reform of Norwegian upper secondary level education. It was first and foremost a reform of vocational education, doing away with more than a hundred specialized courses and compressing these into 13 less specialized two-year programs, each followed by a two-year apprenticeship period. There was also increased emphasis on academic subjects, both to facilitate future retraining and to allow vocational students to qualify for higher education by way of the Supplementary Course. What this means for English will be discussed in more detail below. Another major change was that the Business College branch was in practice closed down, part of it merged into the General Studies branch and part into the Sales and Service line, one of the 13 new vocational lines with an apprenticeship period.

In the General Studies branch the structural changes were minor. The most notable were in curriculum format, content, and examinations. With regard to format, the R94 Curriculum limits itself to stating the objectives for the different courses, and forgoes the detailed specification of content typical of its predecessors, in particular the Veierød Advanced English course. Next, examinations were changed to systematically test the stated, but very general, goals. In fact, according to Vice-Director Arild Torbjørnsen of the Directorate of Primary and Secondary Education, examinations are to be considered as interpretations of the syllabus, and provide the

detail lacking in the syllabi themselves.[12] Such close integration represents a major change. With R94 as well as L97, "teaching for the test" now means following the curriculum.

English was perhaps the subject that underwent the largest structural changes in Reform 94. The first-year, five-lessons-per-week, Foundation Course (course code VG 1200) remained as a compulsory minimum for all, the de-facto minimum in Veierød as well. The number of elective English courses, however, was reduced to two. Second-year students were now to choose between a one-year, three-lessons-per-week, General English course (course code AA 6071), or the advanced, five-lessons-per-week English 1 course (AA 6070). As in Veierød, students opting for in-depth studies in the Natural Sciences, meaning three advanced courses, or an elective course in another language than English, were exempted from this requirement.

Students starting on English 1 have the additional option of leaving this course after only one year, although statistics show that most who start English 1 go on to the third-year English 2 course. Both courses have five-lessons-per-week. Depending upon what the school offers, students taking the English 2 course can choose between two roughly equivalent alternatives. The first, Alternative A, focuses on English literature and civilization, while Alternative B includes topics and texts from Economics and Business (course codes AA 6080 or AA 6081 respectively). The syllabi for these will be examined in more detail following a presentation of English in vocational education.

**R94 English courses – Vocational Branch**

One of the major changes engendered by Reform 94 was, as mentioned earlier, that students in vocational studies are given the opportunity to qualify for higher education. This means increased focus on academic subjects at the expense of vocational ones during the first two years, and on having these subjects count towards "study competence."

For English the minimum requirement to go on to higher education is as mentioned the five-lessons-per-week Foundation Course. In the vocational line students have two compulsory English lessons per week in their first year, and two more in the second. Teaching is according to the R94 syllabus, but adjusted to the

[12] Talk to members of the committees appointed by the Directorate of Primary and Secondary Education to make upper secondary level examination papers.

vocational line with topics from the profession being studied, as specified by Target 6 (*Læreplan for videregående opplæring: Engelsk: Felles allment fag for alle studieretninger*, 1993). After these two years students may be selected for local examinations.

Students who decide to qualify for higher education may do so by opting for a Supplementary Course class (in General Studies subjects). They may do so directly, wait until the completion of their two-year apprenticeship period, or do so after having worked for a while. The Supplementary Course is a one-year intensive program focusing on Norwegian, Modern History, Mathematics, and English.[13] As mentioned this course builds upon the instruction in English, Norwegian and Mathematics in the first two years of vocational studies. For English this means that students on the Supplementary Course have to take a one-hour-per-week English course covering the targets not covered in the vocational courses. Students who do so are registered for the same national English Foundation Course (VG1200) examinations as students from the General Studies branch.

Table 2.2 below provides an overview of the current structure of the R94 English courses in the General Studies branch and the Vocational Studies branch with the Supplementary Course.

Table 2.2. Overview of English courses on the General Studies and Vocational branches according to the R94 guidelines. Compulsory courses are in bold type. Course codes indicate the examination number.

| Level | General Studies branch | | Vocational Studies branch |
|---|---|---|---|
| Grade 1 | **English Foundation Course**<br>5 lessons-per-week<br>VG 1200<br>(Compulsory) | | **English Course**<br>2 lessons-per-week<br>(**Module 1**)<br>(Compulsory) |
| Grade 2 | English 1<br>AA 6070<br>5 lessons-per-week<br>(Elective) | General English course<br>AA 6071<br>3 lessons-per-week<br>(Elective) | **English Course**<br>2 lessons-per-week<br>(**Module 2**)<br>(Compulsory) |

[13] This is specified in detail in the circular letter *Rundskriv F-021-97*, from the Ministry of Research and Education, retrieved 13 January 2003 from the Ministry Web site: http://www.odin.dep.no/ufd/norsk/regelverk/rundskriv/014005-991161/index-dok000-b-n-a.html.

| | | |
|---|---|---|
| Grade 3 or Supplementary Course class | English 2<br>5 lessons-per-week<br>(Alternatives A or B)<br>AA6080 or AA6081<br>(Elective) | English Course<br>1 lessons-per-week<br>(Module 3)<br>VG 1200<br>(Elective) |

* English 1 and 2 are referred to as the Advanced English Course

Though the Supplementary Course is designed to offer students on vocational lines the opportunity to go on to higher education, personal experience grading VG 1200 examination papers over a number of years indicates that these students almost invariably score well below those from the General Studies branch.[14] Whether this is due to the fragmented 2+2+1 structure taught over two or three years, a lower status for academic subjects in vocational branch with the consequences this may have for teaching, or differences in the students' personal resources, is an issue in need of further investigation. Again, this would have to be in a separate study.

**The compulsory R94 English Foundation Course Syllabus**

One of the main differences between the format of the R94 Curriculum and its predecessors is that, as noted above, it limits itself to stating general goals or targets. Apart from this, the syllabus follows much the same structure as in Veierød. It starts with an introductory chapter providing General Information, has a second chapter called Targets and Focal Points instead of Content, and a third chapter on Assessment. There is, however, no chapter about Learning Activities as in Veierød.

The chapter on "Targets and Focal Points" specifies six general targets for the course, each point furnishing additional detail:

- Comprehension of spoken English
- Comprehension of written English
- Use of spoken English
- Use of written English
- The English-speaking world
- English in relation to the respective areas of study

[14] The exact numbers are not available since the type of class is not registered in the examination data.

Reflecting the strong emphasis put on the function of assessment as a means of influencing teaching, the chapter on assessment is fairly detailed and provides the general principles for English instruction upon which assessment is to be based. It specifies as a general goal that students are "to achieve a high level of communicative competence" (*Læreplan for videregående opplæring: Engelsk: Felles allment fag for alle studieretinger*, 1993, point 3.4, my translation). It continues:

> An optimal level of communicative competence in English as a foreign language is being able to understand authentic English in all types of authentic communication and being able to use correct, idiomatic English in all types of situations. In the context of Norwegian education the final goal will, necessarily, have to be set below the optimal level of competence (point 3.4, my translation)

Furthermore the syllabus splits communicative competence into six components to illustrate what this comprises: linguistic competence, socio-linguistic competence, discourse competence, strategic competence, socio-cultural competence, and social competence (see Canale & Swain, 1980; van Ek, 1987). It is perhaps the discourse component introduced in R94, and further elaborated upon in L97, that has posed and still poses the greatest challenge to Norwegian teachers of English (Hellekjær, 2001). In the following I will look at its requirements for reading, targets for reading proficiency, and how it details the role of English instruction in preparing for higher education.

"Point 1.1 Why learn English?" provides an overview of the goals for English instruction (*Læreplan for videregående opplæring: Engelsk: Felles allment fag for alle studieretinger*, 1993). With regard to preparing for higher education it states:

> Above all, English is the medium of international professional and scientific communication. English is encountered in most occupations, in for instance user guides and instruction manuals. An inadequate knowledge of English makes it difficult to keep up with the continuous development of knowledge in all subjects and fields of study. It is also important to note that English is the main language of computing and the media (point 1.1, my translation).

At no point, however, does the syllabus specifically mention the role of the Foundation Course in preparing for higher education.

With regard to reading, Target 2 specifies that "students should develop good proficiency in reading different text types, be able to obtain relevant information from a text according to need", and "understand the message and grasp the significant features of the text" (my translation).

In Target 4 on writing, a point reminiscent of the sub-points on study skills in the Veierød Curriculum Guidelines can be found (point 4a), specifying that students "should be able to take written notes, for instance in the form of key words and points, from written and oral sources, and report the main contents in written texts" (my translation). [15]

Target 5 states that students should have "some knowledge of English literature" and specifies that students should be able to present and discuss a minimum of two short stories or excerpts from plays and a literary work. The levels of difficulty are specified by giving examples of texts and authors. Target 5 comes closest to specifying content and minimum requirements for reading. Target 5a states that students are to read at least two short stories and an excerpt from a play, though the latter can also be seen as a play or a film. Target 5b goes on to specify the reading of "a literary work."

The R94 syllabus has been criticized for being vague, and stands in marked contrast to the detailed L97 that was put into effect a few years later. Ultimately, this means that it is the interpretations of teachers, textbook writers, and in particular the examination boards that determine how R94 is implemented.

**Examinations**

The Foundation Course, course code VG 1200, has a five-hour written examination. Unlike L97, there is no preparation time. The examination papers are based upon one or more unknown texts with different types of comprehension questions. Such texts also serve as a point of departure for different writing tasks. A reading comprehension task can start by asking the students to list the main points in the text (Target 4a), and then ask them to express agreement or disagreement with the points or arguments in

[15] The syllabus for Norwegian as a first language specifically mentions study skills, in Target 6 for grade 1, Target 12 for grade 2, and Target 18 for grade 3. It also states that these are relevant for other subjects. Retrieved on 7 February 2003, from the National Board of Education Web site: http://skolenettet3.ls.no/dok/lp/norsk.html

the text in question (Target 4b), in the form of a specified text type such as an article or letter (Target 4c). S. Pettersen ( 2001), in her MA thesis *The Foundation Course in English: Some Aspects of the Written Exam*, points out that these examinations, unlike their predecessors, have managed to integrate the testing of knowledge about the English speaking world into writing and comprehension tasks. She also describes the tasks as more "valid tests of communicative competence than the reading comprehension exercises before R94" (Pettersen, 2001, p. 61). She continues:

> With a few exceptions . . . the tasks given after R'94 test a thorough comprehension of the text. Whereas the questions given before R'94 more often than not tested the comprehension of minor, local items in the texts, the tasks given after R'94 seem to test to what extent students have grasped the main ideas in the texts, i.e. have got a more global understanding of the text (p. 61).

Pettersen also describes a trend where the unknown texts have gradually become longer as well as more demanding linguistically and conceptually. This development has continued, and in 2002, when the first students who had completed 10th grade according to L97, *Time* or *Newsweek* articles with little or no adaptation were used. Compared to the Veierød Foundation Course examinations (AF 2050) this means that VG 1200 examinations have increased the level of textual difficulty as well as introducing new types of tasks to test reading comprehension. Levels of difficulty notwithstanding, two important constraints affect the testing of reading proficiency. The first is the written examination format without preparation time, which limits the testing of reading to the use of fairly short texts. As Urquhart & Weir (1998) argue:

> The length of the text(s) that the candidates are exposed to will influence the strategies and skills that the candidates may be asked to deploy. If the texts are too short it may not be possible to test expeditious reading strategies (search reading, skimming and scanning), only careful reading (pp.145-146).

In other words, despite a trend where texts have gradually become somewhat longer, more linguistically demanding, and conceptually more difficult, it is doubtful that they have had much impact on students' reading strategies. A second constraint is that

the VG 1200 examinations, as most other matriculation examinations, have to test more than just reading proficiency. In addition to writing proficiency, they also test the learners' knowledge of the English-speaking world. Therefore, despite the use of more demanding texts and more varied tests of reading proficiency, there is little reason to believe that the VG 1200 English examinations have had much impact on the place of reading in the classroom, or on how it is taught.

There is also little reason to believe that oral examination requirements do much to encourage the reading of longer texts and the use of different ways of reading, This is because the targets may be easily covered with a limited selection of short texts, of course with the exception of the literary work that is to be read (see *Læreplan for videregående opplæring: Engelsk: Felles allment fag for alle studieretinger*, 1993, point 5b).

The development that may contribute towards changing the role and importance of reading in the English classroom at all levels is the use of Information and Communications Technology (ICT). This will be discussed in further detail in subsection 2.3.1 below.

**The 1994-2001 Elective English Courses**

As can be seen in Table 2.2, in the second year students can choose between a three-lessons-per-week General English Course (course code AA6071), or the advanced five-hour English 1 Course with a written exam (AA 6070). In their third year those students who choose the latter course can continue with the advanced five-hour Written English 2 course, choosing between the roughly equivalent alternatives A or B, the latter focusing more on business texts (AA 6080 or AA 6081).

The syllabus for all three courses follows the same structure as for the Foundation Course. The *Læreplan for videregående opplæring, Engelsk Studieretningsfag i studieretning for allmenne, økonomiske og administrative fag*, 1994, starts with an introductory first chapter, General Information, a second chapter on Targets and Focal Points and a third chapter on Assessment. The second and third-year courses are described consecutively in Chapter 2 of the syllabus. Point 2.2 presents the three-lessons-per-week General English Course in Module 1 (AA6071). When this is combined with Module 2 these together comprise the English 1 Course (AA 6070). The third-year, advanced English 2 alternative (AA 6080) is described in point 2.3, and Alternative B (AA 6081) in point 2.4.

To return to the question of study competence and reading proficiency, the General Information chapter for the three courses explicitly states the importance of English in preparing for higher education:

> [in] the Foundation Course students have acquired basic English skills. The advanced courses aim to prepare students for studies at college and university and for active participation in an increasingly internationalized society, for work and for recreation (point 1.1, my translation).

With regard to reading, it continues;

> "Work with literature and texts dealing with social and cultural issues are to provide students with in-depth communicative competence. In addition it is to develop appreciation for the reading of good literature and the ability to interpret as well as enjoy" (point 1.1, my translation).

It is not quite clear whether this refers to the value of literary studies, or to the value of extensive reading for both language and cognitive development. These are, of course, not mutually exclusive. The question to ask, however, is to what extent this explicit focus on reading is reflected in the syllabus requirements and examinations.

**The second-year English courses**

Module 1, point 2.2.1, presents the contents and goals for a three-lessons-per-week course that can be taught as a separate unit, the General English Course (AA6071), which may be followed by an oral examination. If Module 2 is combined with Module 1 they together comprise the five-lessons-per-week English 1 Course (AA 6070), from which students may continue to the English 2 Course.

Module 1 is quite specific on reading proficiency. Target 1, on the understanding of spoken and written English, requires students to be able to read long texts within their fields of interest (1a), and be able to understand and discuss the content and themes of linguistically and cognitively demanding texts at relatively high levels of difficulty (1d).

Target 2, knowledge about the English-speaking world, specifies the reading of at least one novel, five short stories, a selection of poems, a play or a film, and a

number of factual texts from five specified topics. All are to be relevant to the English-speaking world, particularly the post-1900 period.

Students on the English I course will, as already mentioned, combine Modules 1 and 2. Module 2 comprises Target 3, which requires students to work in-depth with and be able to present at least two of nine given topics from the English-speaking world. In addition, point 3b specifies that students are to be able to collect and analyze information from literary and factual texts and from other sources of information. In practice Module 2 has been interpreted to mean project work, though other interpretations are possible (Gulbrandsen, 2002).

In other words, both modules require students to develop the ability to read advanced texts and process the information in these, a requirement that clearly reflects the realities of higher education. The question is whether the reading of a minimum of five short stories, a few poems and factual texts and a novel as specified in Target 2, Module 1, is sufficient to develop this proficiency. Module 2 is, perhaps, the most promising part of the syllabus in this regard, since it mirrors the reading and processing of English texts in higher education by requiring students to read and work with a variety of sources. These can comprise short and long literary and factual texts as well as Internet sources. In order to process this material students will have to alternate between skimming, scanning, and careful reading, that is to say if the module is taught as intended. Many teachers consider these topics overly time consuming, and some teachers are sceptical towards the extensive use of project work (Gulbrandsen, 2002). The implementation of these topics is also difficult to test within the current written examination format. It is therefore reasonable to expect that the emphasis put on these in the English classrooms might vary.

**The third-year English courses**

Third year students who have completed the English 1 Course may continue with the advanced five-hour English 2 Course, choosing between the roughly equivalent alternatives A or B, the latter focusing more on business texts (AA 6080 or AA 6081).

For reading, the goals change little from the previous year. The changes mainly consist of a clearer specification of writing proficiency in connection with reading, and of the ability to understand and comment upon literary texts. In Alternative B the reading requirement is expanded to include factual texts dealing with economic, administrative, and social topics.

As a minimum requirement Alternative A specifies a selection of literary texts from at least three periods before 1900 (Target 4a). From the period after 1900, students are to be able to analyze and discuss two literary works, five short stories and a selection of poems. For Alternative B this number is reduced to a minimum of one literary work, three short stories, a small selection of poems and a small selection of factual texts, all from the period after 1900 (Target 4).

**Examinations**

The syllabi for the 1994-2001 Advanced English Courses and the examinations have been the cause of extensive controversy. The first source of conflict was the disappearance of the highly popular set texts of the Veierød syllabus for Advanced English Course. Ibsen & Wiland (2000) mention that:

> the committee that initially suggested set texts for VKI [year 2] and VK2 [year 3] found their work overruled by the Ministry when the syllabus was removed. For this reason, some members withdrew from the committee (p. 82).

A later complaint was that the third year syllabus for English 2 was too large, and that many considered Alternative B to be an easier alternative.

A third area of complaint concerned the new examinations, which have to test the students' ability to present and use their knowledge at a more general level. The objections were either that the examination questions were so vague that "anyone could come in off the street and pass the examination", or that they were discouraging for both teachers and students in that they did not reflect what the students had worked with in the English 2 Course. Many teachers found the examination requirements with regard to discourse competence problematic, finding themselves poorly prepared by their teacher education to evaluate examination papers with respect to coherence, cohesion, rhetorical organization and other genre conventions, in addition to content and sentence level grammar (Gulbrandsen, 2000).

The introduction of a preparation period turned out to be yet another problem. The examinations for the second and third years introduced a preparation time, one-hour during which students were to prepare, singly and together, using a booklet with a collection of relevant literary and/or factual texts. Students were also allowed to take notes during preparation and use them during the four-hour examination. Using

preparation time in this manner for all three examinations is in practice a test of the students' ability to read, process, and present information, targets mentioned in the syllabus that are relevant for higher education as well. That is to say, if the students avoid copying uncritically.

In sum, in the R94 syllabus, the English syllabi and examination requirements for the second and third year courses are clearer than in its predecessor with regard to stating the goal of preparing students for higher education. The same is the case with regard to examinations and their testing of areas of competence relevant for higher education. However, the requirements with regard to reading remain moderate.

The syllabus for the second and third year courses has recently been revised and went into force from the 2002/03 for the second year courses, and for the third year from 2003/2004. Although none of the respondents in this study have followed the new courses, to complete this overview the changes are presented briefly below.

**The 2001 Elective English Courses**

The revised syllabus went into force in August 2002 (see *Læreplan for vidaregåande opplæring Engelsk studieretningsfag, alle studieretningar*, 2001). It is basically a revision of content and progression; the basic structure as well as the number of lessons in each course remain the same (see Table 2.2). One change is new names for the different courses. What was formerly the General English Course (AA6071), is now Module 1 and called 2 English 1 (AA 6078).[16] If Module 2, called 2 English 2, is combined with Module 1, they together comprise the five lessons-per-week English 1 course and is called the 2 English 1+2 (AA 6078). The English 2 Course alternatives A and B (AA 6080 or 6081) are now 3 English A (AA 6082) and 3 English B (AA 6083) respectively.

Except for some redistribution of the content between the second and third years in the second and third year courses, the overall changes from the previous syllabi are minimal. For instance, the General Introduction retains the focus on preparing for higher education, but in a somewhat modified form:

[16] The new examination codes distinguish between examinations for ordinary students, and for external candidates. In the following I refer to those for ordinary students.

> The English Foundation Course builds upon and has developed the basic skills acquired in the 10-year compulsory school. Depending on the English course and the lines selected English is to provide students with a basis for college and university studies, and prepare for active and critical participation in an increasingly internationalized society, for work and for recreation (point 1.1, my translation).

The wording on developing communicative competence through reading and appreciating literature in the General Introduction of the 1994 version remains unchanged.

For the second year the main changes concern the "project" part of the old English 1 course. In the new plan this was retained in the new Module 2 as Target 4 in point 2.2.2. However, it was made less specific to allow for adjustment to the needs of other branches than the General Studies branch, the Sales and Service line in vocational education in particular. This meant removing the previously specified nine topics from the English-speaking world.

The other major change was moving topics from the third year to the second year since many considered the 3rd year syllabus too crowded. Last, attempts were made to put alternatives A and B on a more equal footing with regard to workload. The previous alternative B course had generally been considered an easy option.

No significant changes were made with regard to required minimums for reading, or targets for reading, though the inclusion of Target 4b specifying that students "are to be able to use basic concepts for textual analysis" (my translation) will have interesting implications for new examinations as well as teaching. The first examinations according to the revised syllabus for the second year English were held in the spring of 2003, and for the 3 English A & B Courses in 2004. More information on the revisions can be found in the articles by Gulbrandsen (2001, 2002).

### 2.2.7. Upper secondary EFL syllabi and reading - summing up

This examination of the upper secondary Veierød and the R94 English syllabi has looked at what these syllabi say about the development of reading proficiency, and the requirements for reading. It has also examined examination requirements to see

whether they indirectly promote, or do not promote, activities suitable to developing reading proficiency.

First of all, both syllabi recognize the role of upper secondary EFL instruction in preparing for higher education. The Veierød EFL syllabus is the least clear in that this is mentioned in connection with some English courses and not with others. The R94 EFL syllabus, however, is quite specific on the role of the second and third year English courses in preparing for higher education. This syllabus also clearly specifies the development of reading proficiency as a target. The first contradiction, or problematic area, is the minimal reading requirements of both the Veierød or R94 syllabi. Although it might seem simplistic to claim that the number of texts alone is decisive for the development of advanced reading skills, the number of texts specified by the syllabi does seem minimal. The requirements for the R94 syllabus, for example, are displayed in Table 2.3 below:

Table 2.3. Overview of minimum requirements of specified reading in the R94 syllabus, 1993-2001 and revised 2001 syllabi.

| Foundation Course | English 1 | English II, Alternative A |
|---|---|---|
| • Two short stories or excerpts from a play, read or seen<br>• One literary work | • One novel<br>• Five short stories<br>• A small selection of poems<br>• A play or a film<br>• A selection of factual texts | • A representative selection of literary texts covering at lest three literary periods. Shakespeare is to be represented, in excerpt form if necessary<br>• 2 literary works<br>• five short stories<br>• a selection of poems |

Four novels, one play, about 12 short stories, some poems, excerpts from plays and an indeterminate number of factual articles are all that is specified over three years of English instruction for students who select the Advanced English (1 & 2) Courses. Those who do not are required to read far less. Of course these minimums will be exceeded in practice, if only because a larger number of factual texts will be required to cover the topics. Nevertheless, these requirements can hardly be considered enough to force teachers and students to use other strategies than careful reading, or to ensure the development of a vocabulary adequate for higher education.

The second built-in contradiction in both syllabi is that while preparing for higher education is designated as a goal for the second and third year courses it is only the

first-year English Foundation Course that is compulsory. As will also be seen in Chapter 5, many university level students often do not complete more than the Foundation Course. There are, however, two developments that might contribute to improving EFL instruction with regard to preparing for higher education. The first is the implementation of Information and Communication Technologies (ICT), the second of Content and Language Integrated Learning (CLIL). I will discuss these below.

## *2.3. Other aspects of EFL instruction*

### 2.3.1. ICT in the English classroom

ICT is currently one of the areas that the Norwegian Ministry of Research and Education is concentrating on.[17] Schools at all levels are being encouraged to invest in computing facilities and teachers to integrate ICT into their teaching. For English, both "Chapter 2" of the Foundation Course 1993 syllabus and "Chapter 2" of the revised 2001 Syllabus for the Advanced English Courses mention the use of ICT. The latter syllabus is the clearest, and states that students should be "able to use information and communication technology and other available sources of information in a critical and independent manner" (*Læreplan for vidaregåande opplæring Engelsk studieretningsfag, alle studieretningar*, 2001, point 2.1, my translation).

With regard to English, the use of ICT may facilitate changes in examinations, textbooks, and teaching that will improve reading proficiency by providing extensive access to different kinds of text. Furthermore, the use of ICT as an alternative or supplement to EFL, may encourage, even force, students into using other ways of reading, i.e. scanning and skimming, not just careful reading. It might also lead to more reading overall. In fact, ICT is also bringing about changes in how textbooks are designed and used.

[17] See the website for the Norwegian Ministry of Research and Education, retrieved 11 February 2003 from: http://odin.dep.no/ufd/norsk/satsingsomraade/ikt/index-b-n-a.html.

To give an example, the large Norwegian publisher Aschehoug, a market leader in English textbooks, recently published new textbooks and a teachers' resource book for the second-year 2 English 1 & 2 courses (Hasselgård, Haugom, Knutsen, & Årskaug, 2002; Hasselgård, Knutsen, & Årskaug, 2002; Knutsen, Hasselgård, Haugom, & Langseth, 2002). These are called *Visions 1* for the 2 English 1 module, and *Visions 2* for the 2 English 2 module. These textbooks are supplemented with a website: http://www.aschehoug.no/visions. *Visions 2*, however, is not a traditional textbook but a folder; the *Teacher's Resource Book* describes it as a resource file, not a book. Hasselgård, Haugom, Knutsen, & Årskaug (2002) explain this as follows:

> *Visions 2* aims to meet the requirements of the new curriculum for students enrolled in the two-hour English course from all lines of study. A resource file is flexible; students can put things in and take things out, and may be used as the basis of a portfolio evaluation. *Visions 2* aims to give students practical support and guidance in connection with doing research and presenting their findings. It can be used on its own, or in combination with the *Visions 2* website, located at http://www.aschehoug.no/visions2. The cost of using this website is included in the price of the student file (p. 118).

The *Teacher's Resource Book* also includes a chapter called "Working with the Internet", including information on how to check whether students have used ready-made essays downloaded from the Internet (Hasselgård, Haugom, Knutsen, & Årskaug, 2002, pp.123-125).

*Visions 2* and its website are interesting examples of how textbooks/resource files and the Internet can supplement each other, and how textbook writers can use ICT to transcend what has been one of the main limitations of the genre, the textbook format. The different source sheets in *Visions 2* that provide a number of relevant magazines and book titles, both fiction and factual, can be supplemented with Internet texts, for instance when researching a topic. *Visions 2* also illustrates the potential of the 2 English 2 Course for the development of reading and information processing skills. As always, however, examinations will play an important role in how these intentions are put into practice.

**Examinations and ICT**

The Norwegian National Board of Education currently has two pilot projects on the use of ICT in examinations underway. One is for the 10-year Compulsory School English examinations, the other for the upper secondary English Foundation Course, course code VG 1201. The Foundation Course experiment comprises a number of classes at different upper secondary schools where the teaching of English has been based on the use of ICT. Special examinations (VG 1201) have been made for these classes. These have a different format than the regular examinations and include preparation time. This preparation time, during which students are to work with a designated topic, has varied from 24 hours to one week. In this time students are to research the given topic. Cooperating with others in their class, or even at other schools, is part of the process. After the preparation time students sit for the VG1201 written examination, for which they are free to use all available resources. The examination tasks are designed to avoid reproduction and to encourage autonomous, critical thinking. Learners are reminded in the instructions that they are to make use of the research they have carried out during the preparation period. Recent examples of these examination papers can be downloaded at http://www.ls.no/sak.asp?NewsID=140.

Whether this new type of examination will be implemented at a national level or not is yet to be decided. A possible alternative would be the use of student portfolios (Gulbrandsen, 2002). In the meantime, current syllabi and examinations do not preclude the extensive use of ICT for English instruction. In fact, as *Visions 1&2* illustrate, using ICT more extensively might even be necessary if key goals in the English syllabus are to be attained.

### 2.3.2. Content and language integrated learning

Not all language instruction has to take place in the foreign language classroom, it can also be integrated into the teaching of non-language subjects. In Norway this was first known as bilingual instruction. However, it is also known as Teaching Content in a Foreign Language (TCFL), extended language instruction, language-enhanced content instruction, immersion, or as Content and Language Integrated Learning (CLIL). It can briefly be defined as the teaching of non-language subjects through a foreign

language, with *both* subject matter and language learning as goals (Brinton, Snow, & Wesche, 1989; Nikula, 1997). The following discussion is limited to CLIL classes taught to students with Norwegian or English as their first languages (L1), excluding the issue of language minorities taught in other languages than their L1.

The first four classes with bilingual instruction in Norway started in 1993, all at the upper secondary level, and with the support of the Ministry of Research and Education. The language of instruction was English, the subjects History, Religion, Tourism, and Cooking Theory. The number of schools classes has grown since then, with some in French and German.[18] The subjects covered are predominantly from the General Studies branch: History, Religion, Social Studies and Physics. No overview of the number of classes is currently available.

In Norway the requirements for CLIL courses, as determined by the Ministry[19], are that at least 30% of the teaching is in the target language, that students are to be volunteers, and that teaching is to be in accordance with current curricula and the same examination requirements as for other students. Students do not get any extra points for these courses, but if they have completed a course where at least 30% of instruction has been in the target language, this is specified in their school diplomas. There are no rigid requirements with regard to language use for examination purposes although the use of the target language is encouraged. The textbooks and other materials are either American or British, and/or produced locally if the subjects have a syllabus specific to Norway, as is the case with Religious Education.

Immersion and CLIL instruction have been researched extensively. In Norway it has been presented and discussed in separate articles (Hellekjær, 1994a, 1995, 1996). It is effective with regard to language learning, and it provides an alternative or possibly supplementary means of developing advanced Foreign Language (FL) proficiency. This is partly because CLIL students get extensive reading experience in the target language, and partly because they learn to adjust how they read to reading

[18] A survey of the number of schools with CLIL classes is being carried out in January 2005. I would on the basis of personal contacts with teachers involved suggest that at present there are about ten to 30 classes.

[19] These conditions were first set down in a letter of 10 May 1993 from the Ministry of Church, Research and Education, reference 93/8622, "Tilbud om midler til prosjekter i fag på fremmedspråk 1993/93; Forsøk med bruk av fremmedspråk som medium i andre fag, bilingval undervisning."

purpose. In my experience this had to be taught explicitly, because students rapidly ran into difficulties due to excessive careful reading. At the outset many even considered quitting the course for this reason (Hellekjær, 1996). My positive experience with the efficacy of CLIL instruction with regard to developing reading proficiency led to the inclusion of respondents with such instruction in the survey presented in Chapter 5 (section 5.6).

## *2.4. Discussion*

In the following discussion of how English instruction in Norway develops academic English reading proficiency I will concentrate on the upper secondary level EFL syllabi and instruction in the General Studies branch. This is because one of the goals of this branch is to prepare students for higher education. Although the Veierød syllabus will be mentioned, the main focus is on the current R94 syllabus. I will continue using Sivesind's (2002) distinctions between curricula as direct and indirect forms of control and guidance.

### 2.4.1. Syllabus and course requirements

As mentioned above, both the Veierød and the R94 upper secondary level English syllabi recognize the role of English instruction in preparing students for higher education. Though the Veierød English syllabus can at times seem self-contradictory in this respect, R94 is particularly clear. In both syllabi preparing for the use of English in higher education is assigned to the second and third year English courses. However, this clearly defined role is undercut by rules exempting large groups of students from these courses. It was and is possible for students specializing in the Natural Sciences, or in another language such as French or German, to discontinue English after the Foundation Course. In Reform 94 this situation is further exacerbated. One reason is because the Foundation Course has been made the minimum requirement for vocational students who complete the Supplementary Course in order to qualify for higher education. Second, it has also been made the minimum requirement for popular General Studies lines such as Music, Dance and Drama or Athletics. When in addition neither the new nor the old syllabi for the

English Foundation Course reflect its de-facto role as the minimum requirement for higher education, this compromise is a problematic one indeed. The question is how many students this involves.

In Table 2.4 below, recent figures from the National Board of Education show the distribution of students with regard to choice of English courses. It is based on the examination registration numbers for the spring terms in the 1998 to 2002 period. These are the lists from which students are selected by lottery to take part in the national examinations each spring. The spring term figures are used since the majority of the students take the-end-of-year examinations in May or June. Data on external candidates and fall term examinations have not been included because numbers are low, as often as not comprising students doing a re-sit or trying to improve their grades. These would therefore not give a proper picture of the distribution between courses.

Table 2.4. Spring term registration for national, upper secondary level English examinations.

| | Students registered for Spring term English examinations | | |
|---|---|---|---|
| | Foundation Course VG1200 | English 1 AA 6070 | English 2 – Advanced English Courses (Alternatives A and B) AA6080& AA6081 |
| 1998 | 39,883 | 10,844 | 10,475 |
| 1999 | 34,490 | 10,103 | 8,963 |
| 2000 | 36,026 | 9,829 | 8,363 |
| 2001 | 36,074 | 9,487 | 8,042 |
| 2002 | 34,682 | 9,715 | 8,083 |

* Source: The Directorate of Primary and Secondary Education.

One shortcoming with this overview is that the numbers for the many students who complete the three-lessons-per-week oral General English course (AA6071) in their second year are not available. This is because they are registered and selected for oral examinations at the county level. To give an idea of the distribution between first, second, and third year English courses, the numbers of respondents in each category from surveys presented in sections 5.3, 5.4, and 5.6 in Chapter 5 are presented in Table 2.5.

Table 2.5. Distribution between 1st, 2nd, and 3rd year upper secondary level English courses in three surveys of university, college, and upper secondary students presented in Chapter 5 below.

| Sample | English Foundation course | Second year English courses | Third year English courses | Other Courses | Missing answers |
|---|---|---|---|---|---|
| Section 5.3 574 university level student respondents, | 195 (34%) | 155 (27%) | 167 (30%) | 57 (10%) | 4 (>1%) |
| Section 5.4 52 university level student respondents, | 18 (34%) | 10 (19%) | 21 (40%) | 3 (6%) | 1 (3%) |
| Section 5.6 217 upper secondary student respondents, | 59 (27%) | 39 (18%) | 116 (54%) | 3 (1%) | |

Another weakness in the category Second year English courses in the table is that it comprises both students who completed the three-lessons-per-week General English Course as well as those taking the five-lessons-per-week English 1 course who did not continue to the third year. The latter category, however, is a small one. As will be discussed in Chapter 4, it should be kept in mind that these are convenience samples and can therefore only present a tentative picture of the distribution.

The data in Table 2.4 indicates that somewhat less than a third of the students take a second year English course, and that somewhat more than a third stop after the Foundation Course. I have already mentioned that this is a course where the targets in the syllabus do not even specify the development of reading and other English skills needed for further education. In addition, I have questioned whether the second and third year English courses are designed to assure the development of Academic English reading proficiency. It might therefore be that choosing these courses does not mean improved reading proficiency, something that will be examined in sections 5.2 to 5.6 below.

One of the areas in which the Veierød and the R94 English syllabi differ concerns the specification of reading skills. The Veierød syllabus distinguishes between intensive and extensive reading, though this distinction disappears in the revised 1992 plan. It also specifically mentions reading as a necessary study skill. The R94 and 2001 Advanced English syllabi are not only clear about the value of reading for language development, they also clearly specify aspects of reading proficiency as targets. There is also a clear progression in the target specifications: students are expected to be able to read and understand at the Foundation Course level, whereas at

the Advanced levels they are expected to be able to read, understand, and comment orally or in writing upon what they have read. In fact, the Advanced English Course targets seem to reflect the actual skills and levels of proficiency in reading that will be needed in higher education. However, what the syllabi specify and the reality of the EFL classroom can be two different things altogether.

Whether targets regarding reading proficiency are actually met is a moot point considering the specified reading requirements. In Veierød these varied from about 130 to 160 pages over one year to about 500 pages over two years for English 1 and 2. As displayed in Table 2.3 above, the minimum requirements for R94 are shown to be about the same. This is problematic for at least two reasons. One is that extensive reading is important for vocabulary development (Coady 1997), which is vital for reading in a foreign language (Grabe, 1988, 1991, 1999; Hazenberg & Hulstijn, 1996). Second, the minimum reading requirements in either syllabi are too modest to encourage the development of effective reading skills and strategies (Hellekjær, 1992; Urquhart & Weir 1998, p.101).

Reading requirements aside, developing efficient reading processes and strategies in a first or a foreign language also requires explicit instruction. On the basis of studies carried out with Norwegian students, Bråten (1997) and Bråten & Olaussen (1998) claim that instruction in these areas must be long term and explicit in explaining and teaching processes and strategies that improve reading comprehension. Instruction should also include a large number of reading tasks. Despite long term and intensive instruction in reading strategies Fjeldbraaten (1999), reports that Oslo College students, despite taking part in such a program, quickly reverted to the careful reading learnt in primary and secondary school as soon as they came under pressure. Though these studies are based upon reading in Norwegian as a first language, their findings should also be relevant for English. Therefore, despite the specification in the R94 syllabus of reading proficiency as targets for instruction, and despite study skills being specified as targets in the Norwegian as a first language syllabus, there is little reason to expect that most Norwegian students have had the focused and long term instruction necessary to develop these skills and strategies.

## 2.5. Conclusion

To sum up, neither R94 nor its predecessor are consistent in defining the role of English instruction in preparing for higher education. Though R94 is clearest in this respect, it, as was also the case with Veierød, immediately contradicts this clarity by allowing students to opt out of the second and third year English courses that are to prepare for higher education. In fact, the syllabus that a third of the students settle for – the English Foundation Course – does not have preparing for higher education as a stated goal.

On the other hand, this might not matter. With the possible exception of Module 2 in the 1994-2001 syllabus for the Advanced English Course, and the equivalent Module 3 – the 2 English 2 Course in the revised syllabus, the minimum requirements for reading are modest. They are far too modest to require, or perhaps force, both students and teachers out of a general tendency towards careful reading, which is described by Urquhart & Weir (1998, P. 87) as "slow, laborious." Reading for vocabulary development is yet another issue.

All in all, the lack of a clear focus on developing reading proficiency, the modest requirements with regard to reading, and examinations that have to test reading as an integrated skill, give reason to question the quality of Norwegian EFL instruction with regard to preparing for the reading in English in higher education.

This makes it important to ascertain whether, and to what extent, EFL instruction does or does not prepare Norwegian university and college students for the reading of the English texts and textbooks on their reading lists. A second issue is whether the students' choice of English course affects this at all. It may well be that neither the second and third year elective EFL courses effectively develop reading proficiency. Maybe other factors, individual variables such as reading habits or interest in the subject are more important than course choice.

By investigating these issues this study will, in fact, function as "an acid test" of the quality of recent and current Norwegian EFL syllabi and instruction. It may well be that large numbers of students have problems reading English, and that their choice of elective English courses have little or no impact on reading proficiency. This analysis of Norwegian EFL syllabi shows that such an outcome should hardly come as a surprise.

# 3. READING IN A FOREIGN LANGUAGE

## *3.1. Introduction*

In *Reading in a Foreign Language*, Alderson and Urquhart (1984, p. xv) claim that providing an "overview of that area of academic investigation that has come to be called reading research is fast becoming impossible, because of the vastness of the area. . . especially in the study of reading in one's first language." About 20 years later this task has by no means become a less daunting one. Nor is a comprehensive overview my intent with this chapter. Instead, my main goal is a definition of reading proficiency that can serve as a possible construct definition relevant for academic reading in a foreign language – English – at Norwegian colleges and universities. In this chapter I draw extensively, but not exclusively, upon W. Grabe's survey articles on reading in a foreign language, his most recent ones in particular (Grabe, 1988, 1991, 1999). A key limitation in this chapter is that it focuses on reading proficiency only and does not go into the issue of learning, or reading to learn. Of course, a high level of reading proficiency is a necessary precondition for learning from texts in any language.

I start this chapter with a brief, introductory note on the context of reading (section 3.2). Next, I explain the main differences between reading in a first language (L1) and in a foreign language, here English (L2) (section 3.3). Third, I describe the reading process in detail, first low-level and then high-level processing (section 3.4). Fourth, I present the main factors important for higher-level processing (sections 3.5 & 3.6). Finally, I return briefly to what is typical of fluent reading in a foreign language before suggesting a reading construct (section 3.7). As already mentioned, the sheer scope and complexity of this issue, and not to mention of current research on reading, preclude an exhaustive and detailed presentation.

## *3.2. The reading context*

In "Theoretical Perspectives on Reading," Hudson (1998, p. 50) gives an overview of 'new literacy' approaches to reading that de-emphasize the autonomous reader and look upon reading as a contextually based activity. This approach requires that any

study of literacy events "must account for the socially and culturally situated concrete event and the associated literacy acts (such as reading textbooks and lecture notes, looking at overhead transparencies, and using the information to write a term paper" (Hudson, 1998, p. 50).

Without going further into this debate, the reading context can for this study be specified as the academic reading in English done by students in Norwegian higher education where reading lists comprise English, Norwegian, and perhaps Swedish or Danish texts (see section 1.2). Most of the English texts and textbooks on student reading lists are written for students in the UK or USA for whom English is a first language. The students' purposes for reading are preparing for teaching, seminars, presentations, and for the writing of term papers, and above all, for examinations. Depending on the readers' knowledge and understanding of the area in question, the subject matter of these texts can be specialized and cognitively demanding even in the students' L1, Norwegian. Instruction is for the most part in Norwegian, as are examinations.

## *3.3. Reading in a foreign language*

In Chapter 1 (see footnote 5) I draw upon Bråten (1997) to offer a preliminary definition of reading proficiency as more than just the decoding of the written words in the text, but as the active creation of meaning in an interactive process between information in the text on the one hand, and the knowledge of the reader on the other. Bråten's definition does not distinguish between reading in the first and in foreign languages. This distinction is difficult, if not impossible to make. Alderson & Urquhart (1984) put this as follows: "We do not, and indeed find it difficult to, draw a clear distinction between first and foreign language reading—in fact, it is not clear to what extent reading in a foreign language is different from reading in a first language" (p. xv).

More recent research has not managed to distinguish between reading in the first and in a foreign language either. Instead, according to Grabe (1999, p.11), what "has become clearer [is] that reading in a second language imposes a number of additional constraints on reading and its development." These constraints will be briefly presented below, with focus on the constraints Norwegian students face when having to read in English instead of in their L1, Norwegian.

The first of these constraints is that student readers have to read specialized and cognitively demanding texts for which they do not possess the requisite L2 vocabulary. In fact, Grabe (1988) claims that the lack of "a massive receptive vocabulary that is rapidly, accurately, and automatically processed [. . .] may be the greatest single impediment to fluent reading by ESL students" (p. 63).

A second constraint may be how students have been taught, advertently or inadvertently, to handle difficult texts. While most students will have encountered many such during EFL instruction, it is by no means certain that this has prepared them for the independent reading of such texts. Not only may the degree of contextual support have been high in the EFL classroom, with the teacher explaining and/or interpreting the texts in question in the L2 or even the L1. If these are textbook texts there may also be accompanying word lists with translations. In addition, it is possible to discuss difficult points and words with fellow students as well as the teacher. Indeed, the degree of support in the EFL classroom may be so comprehensive that students never develop the ability to handle such texts independently. Instead they may end up using counterproductive strategies such as excessive dictionary use to try to achieve the same degree of detailed understanding they are accustomed to from the careful reading of EFL classroom (see Urquhart & Weir, 1998, p. 87).

A third constraint is that L2 readers will not necessarily have the same levels of language awareness, for instance at the syntactic level, as they do in the L1. This might require them to focus attention on how the language works while reading instead of relying on intuitive knowledge. This might slow down, or even hinder the ability to guess or infer the grammatical function of unfamiliar words from context. Given that Norwegian and English are closely related languages this might be less of a problem for Norwegians than for students with other native languages. Furthermore, similarities in culture as well as the current extensive exposure to American and British societies and culture through the Norwegian media may also mitigate a fourth area of potential reading difficulty: cultural differences between the L1 and L2 communities reflected in the texts in question.

A last point is the role of the advanced comprehension processing skills[20] and strategies[21] readers have developed from reading in their L1. This can be an enabling,

[20] In this context I define skills as linguistic processing abilities that are relatively automatic in their use and their combinations (e.g. choosing the correct meaning of words with multiple meanings, or semantic propositions formation).

not constraining, factor to the extent that students manage to transfer these strategies to reading in the L2. However, experience with Norwegian students indicates that it should not be taken for granted that students actually have efficient L1 processing skills and strategies to transfer (Fjeldbraaten, 1999). If they do, their ability to transfer advanced comprehension processing strategies from the L1 to the L2 will also depend upon their level of L2 language proficiency. Studies show that students whose L2 proficiency falls below a certain threshold level, known as the Linguistic Threshold Level, are unable to transfer their L1 strategies and skills to the L2 (Bernhardt & Kamil, 1995; Carrell, 1991; Clapham, 1996; Clarke, 1988; Laufer, 1997). This language threshold may vary from individual to individual as well as with "reading task and reader's purpose" (Hudson, 1998, p. 53).

In sum, the key constraints – or handicaps for that matter – that Norwegian students face when reading in the L2 are by Grabe (1999) described as follows:

> restricted recognition vocabularies, greater 'attending to language' demands, limited practice with word recognition skills and fewer opportunities to read extended texts on a regular basis, they will [therefore] typically have much lower reading rates and less automaticity in their processing. This bottleneck for reading processing is not easily circumvented and may take many years to overcome, if it ever is overcome" (p. 33).

In the following, I will explain the mechanisms behind this in more detail. Two limitations can here be mentioned. First of all, most of the research in this area is on reading in the L1. Second, as claimed by Urquhart & Weir (1998, p. 101) it would seem that theoretical literature on reading focuses almost exclusively on one way of reading only, the careful reading for local and or global comprehension of continuous texts.

## *3.4. The reading process: levels of processing*

[21] In this context I define strategies as abilities that are potentially open to conscious control and use (e.g. taking steps to repair faulty comprehension, previewing a text). It should be kept in mind that conscious strategies can become skills with practice, so the distinction between strategies and skills often blur.

The traditional presentation of the reading process starts with bottom-up models, continues with the top-down, and then moves on to the interactive models of the reading process (see for instance Barnett, 1989; Hudson, 1998). The bottom-up model looks upon reading as a process of constructing meaning from the text relatively autonomously – with little use of the reader's background knowledge. The top-down model looks upon reading as a process of approaching texts with a set of expectations, with reading as a continuous process of sampling the text to confirm, reject, or modify these expectations. Interactive models, in turn, describe reading as a process drawing upon both bottom-up and top-down approaches simultaneously. Today Grabe & Stoller (2002) describe these models as:

> metaphorical generalizations that stem from comprehension research conducted over the past three decades. As an initiation into thinking about reading comprehension, these models serve useful purposes; however, they do not clarify more recent research advances (p. 31).

Though they will be referred to below, these three "approaches" will not be described in greater detail here. Instead, I will focus on the current, modified interactive model.

This model considers reading to be an interactive, but first and foremost a lower-level (bottom-up) process that also draws upon higher-levels (top-down) processes. The core process involves recognizing the written word – a process that also involves a top-down aspect, for instance drawing upon the reader's lexicon to access its meaning. Word recognition, in turn, forms the basis for higher-level processing, i.e. the creation of meaning in an interactive process between the reader and his or her language, content knowledge, and processing capabilities on the one hand, and the information in the text in question on the other. In the following I start with lower-level processing.

### 3.4.1. Lower-level processing

Lower level processing begins with decoding, the basic process of recognizing words from print. It comprises the following sub-components; the recognition of orthographic structure, of morphemic structure, and the processing of phonemic information (based upon Grabe, 1999).

Orthographic structure recognition involves the recognition of letter forms, co-occurring letter groups, and spelling patterns. Morphemic structure recognition comprises not only "aspects of word form (e.g. –ed, -tion, -ize, -able, -ly), but also specific and syntactic information that needs to be incorporated into comprehension" (Grabe, 1999, p. 13). Third comes phonemic coding; the matching of sound segments with orthographic symbols or words. During reading, as the eyes move across the written words, these processes work simultaneously to assist word recognition leading to lexical access - the automatic calling up from memory of the word's meaning. Words that are automatically recognized by the reader in this way are known as sight vocabulary. If the words are not recognized, readers may have resort to more time consuming sounding out of the word instead, letter-by-letter or syllable-by-syllable. Alternatively, they may attempt to deduce meaning using the context or knowledge of the subject in question, which also slows down the reading process. This makes vocabulary knowledge crucial to fluent reading, since continuously having to guess or infer the meanings of unknown words slows down the reading process. In addition, it leaves less mental processing capacity for other purposes, such as syntactic parsing.

Syntactic parsing occurs simultaneously with word recognition. It involves the taking in and storing of grammatical information about the recognized words such as word ordering and subordinate and super-ordinate relations among clauses. This information is crucial to the understanding and mental reconstructing of the grammatical structure of the sentence. The importance of grammatical knowledge, syntax in particular, for reading comprehension has been much discussed. Perfetti and Britt (1995) show that it is an essential component in processing, as do Urquhart & Weir (1998). As with word recognition, if the reader possesses the requisite grammatical knowledge, syntactic parsing proceeds rapidly and without conscious effort. If not, the need to sort out comprehension problems slows down the reading process.

The next step is semantic propositional formation (Kintsch & van Dijk, 1978; Rayner & Pollatsek, 1989). This is the process of combining word meanings and structural information into basic, clause-level meaning units, what Grabe (1999) describes as "the semantic information extracted from sentences" (p.16). As reading proceeds, new meaning elements – semantic propositions – are introduced and integrated in a way that makes sense in relation to what has been read before. While propositions that are not repeated and thereby reactivated fade from memory, those

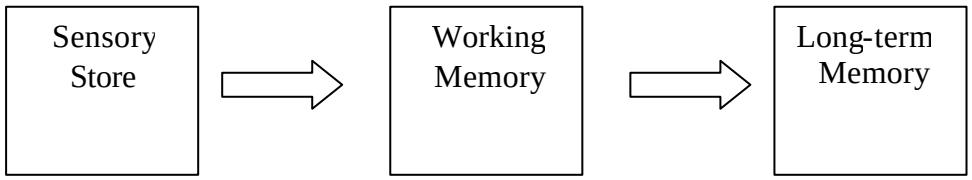
that are repeated become increasingly central, and as new information is linked to old, a propositional network of text meaning develops. As will be mentioned below in connection with higher-level processing, this contributes to the mental construction of a higher-level "text model" that reflects the meaning of what has been read.

With a fluent reader, lexical access with word recognition, syntactic parsing, and semantic proposition formation are lower-level processes that occur relatively automatically. If undisturbed, the process proceeds effortlessly and rapidly in the working memory. However, if the meaning of for instance a new proposition does not seem to fit with the previous, or in case of an unfamiliar word, the reader might have to pause, or even backtrack in reading process to infer or even guess the meaning of what is being read. In this case the limitations of working memory may slow down the process to the extent of what has just been read dropping out of the working memory and being forgotten altogether. It might therefore be useful to discuss the limitations of working memory in more detail before dealing with the higher-level processes.

### 3.4.2. Working memory

The perhaps most common way of looking at human information processing is as a three stage process as displayed in Figure 3.1 below, taken from Rayner & Pollatsek (1989:11).

Figure 3.1. An overview of the human information-processing system. Based on Rayner & Pollatsek (1989:11).




The sensory store represents the initial stage in the information-processing system, comprising the *echoic memory store* for auditory information, and the *iconic store* for visual information such as print. Rayner & Pollatsek (1989) describe it as "highly transient" but with a "large capacity" (p.17). This is the amount of auditory and/or visual information we can store in a kind of "buffer" between input and working memory, for instance during a conversation. For reading, however, Rayner & Pollatsek consider the sensory store of little relevance since the comparable input is always available in the form of the printed page.

Working memory is another matter. This is where information is activated for immediate storage and processing in a cognitive process using the information about words and syntax from lower-level processing to form semantic propositions. As will be returned to below (see subsection 3.4.3), these propositions are processed and linked together into *a text model of comprehension*. This is the first step of higher-level processing and involves forming a mental representation of the information provided by the text during reading. The next stage of processing is integrating and restructuring information and assessing inferences in a process that continuously draws upon information in the long-term memory, which results in the creation of *a situation model* of the text. The goal of this processing is to prepare information for storage in the long-term memory, either as episodic or semantic memory. Rayner & Pollatsek (1989) define these as follows:

> [e]pisodic memory is the memory for sequences of events in your life. Semantic memory, which is more important for understanding reading, contains general knowledge you have. A part of semantic memory that is important for reading is the lexicon (p. 19).

Long-term memory is more or less unlimited in capacity and as often as not the main problem is remembering the cues needed to access the stored information later. The key bottleneck in information processing when reading, however, is the limited capacity of working memory. This is, first of all, because information is stored there for a short time only, from 25 to 30 seconds. Second, the amount of information that can be handled at any one time is also limited, commonly somewhere between seven to nine "chunks" of information. An analogy for "chunks" here would be that it is easier to remember a twelve-digit telephone number as six pairs of numbers than as a single, twelve-digit unit. These limitations of working memory mean that the automaticity of the processes involved in reading will determine effectiveness. If print is quickly and automatically converted to words, recognized and accessed in the long-term memory, parsed syntactically, and turned into semantic proposition units, these are then available for higher level processing and all available mental capacity can be fully devoted to this process. If the processing slows down, for instance due to the reader having to deduce the meaning of unfamiliar words or their grammatical form, processing efficiency and speed go down. If it slows down too much, what is being

read might even slip out of the working memory altogether due to the 25 to 30 second time limit. In practice, this means that only readers with a sight vocabulary and a receptive understanding of the grammar of a language adequate for effortless syntactic parsing will possess the degree of automatization required for quick and effective reading.

### 3.4.3. Higher-level processing

According to Grabe (1999), there is general consensus among reading researchers on the description of the lower level processes up to and including semantic proposition formation. However, at the higher processing levels where information is contributed by the reader "the issues become less clear and more controversial"(Grabe, 1999, p. 17). Grabe argues that there, nevertheless, is sufficient convergence of research on central notions providing " a reasonable general account for discourse processes and the ways that they support text comprehension" (Grabe, 1999, p. 17). The main points of agreement, which to a large extent reflect the work of Kintsch & van Dijk (1978) and Kintsch (1995) follow below.

**The text model of comprehension**

To return to the lower-level reading process, as each sentence of a text is read, word meanings and structural information are combined into semantic propositions at the sentence level (also called micro-propositions). These reflect the key elements of input (words and structure). As this continues beyond the sentence level, the propositions are kept active in the working memory for a second or two, long enough to allow the (fluent) reader time to integrate new with preceding propositions. Thus new elements of meaning are continuously added to a network of ideas from the text. The more often they reappear, and/or the stronger the links to other propositions in the developing network, through for instance cause and effect, part-whole, or subordinate-superordinate relations, the greater their prominence in this network. Likewise, ideas that are not important or not connected to the others tend to fade away from immediate attention. Those that remain are integrated into what may be called a textual propositional network, a *text model of comprehension* or macro-proposition. This can be compared to a summary of the main ideas of the text being read.

Depending upon the nature of the text, inferences drawing upon a reader's background knowledge (in their long-term memory) may be used during this process

to help readers anticipate the discourse organization of the text and sort out word and clausal level meanings or decode new information. Usually, however, "[o]nly information that is mentioned in the text, or that is needed to make some connection between the newly integrated proposition and text model, is typically included in the text model" (Grabe, 1999, p. 18). Thus the text model may wholly, or almost wholly, represent the reader's linguistic comprehension of the text. For more detailed explanations see Kintsch, 1995; Kintsch & van Dijk, 1978; Perfetti, 1994; Perfetti & Britt, 1995.

**The situation model**

Constructing a text model is only the first part in the comprehension process. It is the next stage, the construction of a *situation model* that is most important for reading comprehension. Perfetti (1994) puts this as follows:

> Comprehension is, or at least includes, the construction of mental representations of worlds described by texts, variously referred to as situation models. . . A model of the situation, a full mental model, is a combination of the text representation with knowledge driven inferences provided by the comprehender" (p. 869).

In other words, when constructing a situation model the reader engages in a process of interpreting what he or she is reading. In doing so he or she calls upon background knowledge and in the process he or she is influenced by factors such as goals for reading, motivation, attitudes towards, and evaluations of the information given.[22] Kintsch (1995, p. 142) also mentions that this process requires a great deal of analysis and the making of inferences.

This distinction between text and situation models is useful in that it explains individual differences in reading outcomes. While different readers may produce similar text summaries or models, variations in background knowledge, interest, and other factors among readers may result in the production of differing situation models and even in errors in comprehension. In fact, it is at this level that wrong or incomplete background knowledge, or faulty inferences that are not repaired can lead

[22] Whether constructing the situation model occurs simultaneously with or consecutively to the construction of the text model is not certain.

a reader astray. Thus, the ability to successfully monitor the reading process at both the text and situation model levels is essential for fluent reading. In sum, fluent reading in an academic context requires the ability "to integrate text and background information appropriately and efficiently" (Grabe & Stoller, 2002, p. 28). Below I will look into key factors influencing this processing.

## *3.5. Key factors influencing the reading process*

I begin this section by returning to the importance of background information, which comprises knowledge of the language and text types on the one hand, and content knowledge on the other. Following this I will mention some of the cognitive processes involved in reading: inferencing, metacognitive monitoring, and reading strategies.

### 3.5.1. Background information

Research (Alderson, 2000, p. 33) shows that previous knowledge not only influences what a reader remembers from a read text, but his or her understanding as well as the manner of processing. This knowledge has commonly come under the concept of schema theory. Schemata are by Alderson (2000) described as:

> interlocking mental structures representing readers' knowledge. When readers process text, they integrate the new information from the text into their pre-existing schemata. More than that, their schemata influence how they recognize information as well as how they store it (p. 35).

Recently, schema theory has been heavily criticized for being poorly backed by empirical studies, and as too vague conceptually to be of much use for research on the components of reading comprehension (see for instance Alderson, 2000; Grabe, 1999). Although a schema can be considered "a useful metaphor for the role of background knowledge in reading" (Grabe, 1999, p. 24), I will in the following overview avoid using this term, while retaining some of the traditional distinctions between areas of knowledge from research on this topic. Carrel & Eisterhold (1988) distinguish between formal schemata and content schemata. In the following these

will be referred to as knowledge of language and knowledge of content. The former can be further subdivided into linguistic knowledge on the one hand, and discourse knowledge, for instance of text types, on the other. The latter can be grouped into knowledge of the world, subject-matter knowledge, and cultural knowledge. I will look at how each of these influences reading in the L1 and the L2 below.

### 3.5.2. Knowledge of language

Knowledge of the language of the text(s) to be read is a self-evident aspect of reading, to the extent that it is often taken for granted, in the L1 in particular. As discussed in connection with lower-level processing above (subsection 3.4.1), fluent reading hinges upon a large sight vocabulary that allows word recognition and lexical access to proceed as a more or less automatic process that leaves the limited capacity of working memory free for higher-level processing. Furthermore, sufficient grammatical knowledge to allow the automatic grammatical parsing, which together with word recognition is necessary for the formation of semantic propositions is also necessary. In this connection Alderson (2000) claims: "Measures of a readers' vocabulary knowledge routinely correlate highly with measures of reading comprehension, and are often, indeed, the single best predictor of text comprehension" (p. 35).

Actually, the level of vocabulary knowledge that is required for automatic word recognition required for fluent reading is a much discussed issue. Grabe (1999) cites a number of studies claiming that:

> [f]irst language students at most grade levels read material for which they know 99% of the words on a given page (Carver 1994). Even when students are given reading material three grade levels beyond their school grade, they know 98% of the words on any page (p. 31).

Although this is an issue worth discussing separately, for fluent reading in a foreign language a 95% coverage of the words on a given page is commonly considered a minimum. That is to say, a minimum for the academic reading discussed here. For pleasure reading a 98 to 99% coverage is considered a must (Carver, 1994; Laufer, 1997). To return to academic reading, Goulden, Nation & Read (1990) argue that

well-educated native speakers of English have a vocabulary of about 17,000 base words, and argue that knowing roughly 95% of this level is required. Though daunting enough, this estimate of the total number of words is much lower than in previous studies where they claim that the use of dictionary listings have resulted in inflated estimates. This was mainly because when dictionaries were used to calculate word numbers, earlier studies did not distinguish properly between word types. For instance, they failed to exclude proper nouns or to distinguish between base words and derivatives. Another study, by Hazenby & Hulstijn (1996) modify this minimum requirement further. They examine the levels of vocabulary needed to manage the reading of Dutch beginner university literature using electronic corpora to address the issue of word counts. Their study shows that non-native students require a vocabulary of no less than 10,000 words to understand 95% of the words in Dutch university level texts. They also mention that this ambitious goal still means that readers will encounter about 27 unknown words per page of text. Hazenby & Hulstijn (1996) warn against uncritically transferring these calculations to other languages. However, whether readers need 95% of 17,000 base words, or 95% of a somewhat lower figure is a moot point in this context. I would argue that this requirement has by no means been properly appreciated in either Norwegian EFL syllabi or instruction in general. In fact, reaching this level will not only require extensive and systematic vocabulary instruction, it will also require years of reading practice (Coady, 1997; Day & Bamford, 1998; Grabe, 1999; Paribakht & Wesche, 1997).

A study by Cooper (1984) illustrates what happens when student readers lack the requisite vocabulary and grammatical knowledge. Cooper compared a group of Malayan students who had been educated in English instead of Malay, calling them 'practiced' readers, with ordinary students, 'unpracticed readers', whose only background in English was from EFL instruction. Cooper (1984) found that many of the latter group:

> [w]ere severely disadvantaged by their poor knowledge of vocabulary. In particular, they were deficient in their understanding of the semantic relationships between words – relationships which writers exploit and create in order to make sentences cohere. . . (p. 133)

To return to grammatical knowledge, what is most important is sufficient knowledge of how language works to allow for syntactic parsing (see 3.4.1). This can be taken more or less for granted in the L1, at least for college and university students. For the L2 it would not be unreasonable to assume that EFL instruction has provided a grounding in basic grammar for students at this level. However, developing the level of grammatical knowledge necessary for efficient syntactic parsing means acquiring structural knowledge though extensive exposure to the target language, reading in particular. This might, given the low requirements to reading (see Table 2.3), prove problematic for Norwegian students. On the other hand, given that English and Norwegian are fairly closely related languages with regard to structure, students should within limits be able to fall back upon the L1.

However, there are limitations on to what extent readers may draw upon other sources of knowledge to compensate for linguistic deficiencies. As discussed in section 3.3 above, in the L2 this limit is known as the Linguistic Threshold Level. This threshold determines, varying from individual to individual and from situation to situation, whether students are able to transfer reading processing skills and strategies from the L1 to the L2. Students whose L2 proficiency falls below a certain level, despite their being fluent readers in the L1, prove unable to transfer these strategies and skills to the L2 (Alderson, 2000; Bernhardt & Kamil, 1995; Carrell, 1991; Laufer, 1997). Alderson (2000) puts this as follows:

> The clear conclusion of such studies is that second-language knowledge is more important than first-language abilities, and that a linguistic threshold exists which must be crossed before first language reading ability can transfer to the second language. However, it is clear that this linguistic threshold is not absolute but must vary from task to task: the more demanding the task, the higher the linguistic threshold (p. 39).

This will be further elaborated on in subsection 3.5.4 about background and language knowledge.

### 3.5.3. Knowledge of text type

For the reader, familiarity with how the texts in question are organized is considered important for understanding (see for instance Carrell & Eisterhold, 1988). This

comprises knowing what can be found in a text in a given place, for instance a topic statement in the introduction of a scientific article. How information is signaled, or how to look for the main idea in a paragraph and to identify subsidiary ideas, are other examples. Thus, as with vocabulary, readers who have become familiar with a variety of text types through reading experience and/or instruction will, irrespective of language, have an advantage.

### 3.5.4. Background knowledge and language knowledge

To return to the discussion of higher-level processing above, "knowledge driven inferences provided by the comprehender" are a crucial part in the construction of a situation model (Perfetti, 1994, p. 869). The most common distinctions here are between world knowledge, subject-matter knowledge, and cultural knowledge. In fact, Alderson cites a number of studies indicating that "the background-knowledge effect is very strong." However, he adds the qualification that "such knowledge does not simply need to be available – it needs to be activated by the reader, or the text, if it is to be used in accurate understanding (Alderson, 2000, p. 41). Grabe (1999), on the other hand, cites other studies to claim that "[a] number of studies have shown that background knowledge has a minimal influence on individual differences in L1 reading comprehension more generally, assuming a non-specialist text" (p. 24). The issue at hand here, however, is the reading of articles and textbooks at colleges and universities. This allows us to sidestep this discussion by focusing on the reading of L2 specialist texts.

In her 1996 study, *The Development of IELTS: A Study of the Effect of Background Knowledge on Reading Comprehension*, Clapham investigates the relationship between the language ability and background knowledge of prospective university students for whom English is a foreign language (Clapham, 1996). Her respondents were for the most part Asian students taking the IELTS Academic Reading Module tests of reading for academic purposes and she examined the ability of the respondents to understand texts inside and outside their subject disciplines. Her main finding was that "language proficiency appeared to have a much stronger effect on students' scores than did background knowledge. However, the comparative importance of the variables seemed to depend on the specificity of the tests" (Clapham, 1996, p. 197). Closer analysis of her data showed that for the weaker

students, for those scoring below 60% on the grammar test used to measure their English proficiency, background knowledge had no significant effect on understanding. Apparently, their poor language proficiency did not allow them to compensate for their lack of understanding using a top-down strategy such as drawing upon for instance subject matter knowledge to guess the meaning of unknown words and phrases, or a bottom-up strategy if the specific topic is unfamiliar (Stanovich, 1980). In other words, they fell below the Linguistic Threshold Level.

In contrast, those scoring between 60 and 80% on the test did better on tasks in their subject disciplines, although for those scoring 80% or above this effect diminished. Clapham describes this as a second threshold, a level of proficiency enabling the respondents to use compensatory strategies. At this level the respondents are, according to Clapham (1996):

> so proficient linguistically that they can compensate for a certain lack of background knowledge by making full use of their language resources. As Bernhardt (1991) says (see Chapter 3), linguistic knowledge begins to override knowledge-driven inferencing. This would account for the fact that ESP teachers are able to understand and teach texts outside their own subject area (p. 196).

In sum, Clapham's findings go to show that much, but not all, of the differences between readers at the upper secondary school level and college and university levels can be attributed to language as a variable for reading comprehension. This is in accord with Perfetti's (1994) arguments for the primacy of the language variable:

> reading is primarily a language process and that problems in learning to read arise primarily from linguistic processing problems. I also suggest that while individual differences in comprehension exist in a wide variety of higher order abilities, basic language "reflexes" account for substantive sources of those differences that are truly reading differences rather than general intellectual differences (p. 849).

Though Perfetti refers to L1 reading, his comments are just as relevant for the L2, and are confirmed by the results of Clapham and others. Below I also look at cognitive factors affecting the reading process.

## *3.6. Cognitive processes*

For reading comprehension, separating language and background knowledge and processing skills and strategies might seem an artificial distinction. First of all, they tend to co-occur; readers with efficient skills and strategies are as a rule experienced readers with good language skills, if not background knowledge. Second, while research shows these skills and strategies to be important for reading comprehension, the precise ways in which they contribute are unclear or difficult to identify, not to mention operationalize for research purposes. Grabe (1999) puts this as follows:

> Once efforts go beyond well-established components of reading comprehension processing, the nature of the comprehension mechanisms becomes less clear. Aside from the vague, though still real, contributions of background knowledge, there are also ambiguous results with research in inferencing, strategy use, and metacognitive processing. In almost all cases, training studies indicate some role for these factors, but research results to date do not converge on a clear set of processes and principles that promote comprehension (p. 25).

In the following, with this reservation in mind, I will look at inferencing, metacognitive monitoring, and strategy use in turn.

### 3.6.1. Inferencing

The first of these difficult-to-pin-downprocesses is the ability to make inferences. Though making inferences might help confirm appropriate syntactic parsing (Perfetti, 1994), this is considered less important at the lower levels of processing. It is felt to be more important in the formation of sentence-level propositions and for the interpretion of information from clauses, such as providing the antecedent of a

pronoun. It can also be used to interpret new information in sentences, "particularly if the new information appears at the beginning of the sentence, or if there are multiple sets of new information in a single sentence" (Grabe, 1999, pp. 19-20). Bridging inferences may be necessary if new sentences do not connect directly to the evolving text model (Perfetti & Britt, 1995). Inferences at both the text and situation model levels may also allow new propositions to link thematically, such as "causal antecedent information (*causal antecedent inferences*), or globally relevant information (*global inferences*) or emotional states of characters (*character emotion inferences*)" (Grabe, 1999, p. 20).

Last, elaboration inferences may go beyond this level to contribute to the retrieval and use of additional information from long-term memory to assist in the interpretation of the text. Elaboration inferences, however, are post-hoc, that is to say not part of the on-line text comprehension processing, but occurring when a reader is to recall stored information (Grabe, 1999, p. 21).

### 3.6.2. Metacognitive monitoring

The second factor important for reading comprehension is metacognitive monitoring. This is considered to be separate from linguistic ability and can be described as the ability to monitor understanding and use linguistic and/or content knowledge to repair comprehension (Alderson, 2000, p. 43). It takes place at both lower and higher levels of the reading process. Metacognitive monitoring can, for instance, be initiated by a lack of consistency in the information being extracted from the text in question.

In fact, this ability to monitor and repair comprehension is one of the main factors distinguishing good from poor readers (Alderson, 2000, Bråten & Olaussen 1997). Alderson (2000) describes how this affects poor readers as follows:

> Poor readers do not possess knowledge of strategies, and are often not aware of how to apply the knowledge they do have. They often cannot infer meaning from surface-level information, have poorly developed knowledge about how the reading system works, and find it difficult to evaluate for clarity, consistence and plausibility (p. 41).

In comparison, good readers are:

> more sensitive to inconsistencies in the texts. . . and tend to use meaning-based cues to evaluate whether they have understood what they read whereas poor readers tend to use or over-rely on word-level cues, and to focus on intrasentential rather than intersentential consistency (p. 41).

This focus on the intrasentential may explain the tendency of poor readers to focus on, and be hindered by word problems, which is particularly relevant for L2 reading. The good readers, on the other hand, seem better able to decide when to ignore unfamiliar words. The importance of reading strategies is elaborated on below.

### 3.6.3. Reading strategies

The use of reading strategies is another factor affecting reading proficiency. Above I defined a strategy as a set of abilities that are under the conscious control of the reader. For readers with extensive reading experience many of these conscious strategies might have developed into skills that are used relatively automatically. Examples would be re-reading to sort out a discrepancy in meaning, guessing in order to sort out the meaning of unknown words, or, alternatively, ignoring these if possible. Another would be adjusting how one reads to reading purpose, such as using skim reading to get the main points of the text, search reading to find particular information, or scanning through a text to find a particular name or phrase. Alternatively, it might be necessary to engage in careful reading at the local level to understand the syntactic structure of a sentence or clause, or careful reading at the global level for comprehension of the main ideas of a text. Depending upon the reader's proficiency some of these decisions will be made consciously, others automatically.

This being said, there seems to be little doubt about fluent readers being strategic readers, and researchers have isolated a wide variety of reading strategies. There are, however, a number of problems involved. One is a lack of clarity about what a reading strategy actually is. This is "an area of research which is not easy to categorize as a component process in any neat way, nor is it an area of reading research which has been well defined" (Grabe, 1999, p. 23). This lack of clarity is also reflected in the literature on teaching reading strategies.

To give an example, Alderson (2000) discusses a-not-too-recent but influential example of a textbook on reading, or reading instruction for academic purposes, which is far from clear on what a strategy is. The quote below is from Grellet's (1981) book *Developing Reading Skills*:

> We apply different reading strategies when looking at a notice board to see if there is an advertisement for a particular type of flat and when carefully reading an article of special interest in a scientific journal. Yet locating the relevant advertisement on the board and understanding the new information contained in the article demonstrates that the reading purpose in each case has been successfully fulfilled. In the first case, a competent reader will quickly reject the irrelevant information and find what he is looking for. In the second case, it is not enough to understand the gist of the text; more detailed comprehension is necessary (p. 3).

Alderson (2000) points out that this is just one of many examples of a general lack of clarity in this area:

> Grellet seems to relate strategy to purpose for reading (though these are not identical) and locating information occurs as a result of a number of different processes, depending on the purpose. How strategies relate to rejecting irrelevant information, understanding gist and detailed information is not clear. Nor is the extent to which strategies are conscious or un/subconscious (p. 312).

It might be asked to which extent a textbook such as Grellet's, no matter how influential it has been, can be expected to be entirely consistent in its use of terminology. Nevertheless, when central texts fail to distinguish between strategies and skills, and confuse ways of reading, such as skimming and scanning with reading strategies and/or skills, this does underpin both Grabe's claim about a lack of clarity in the field and Alderson's call for "the need for greater clarity in deciding what are strategies, what are skills, abilities, and other constructs" (Alderson, 2000, p. 311). The question is how important this lack of clarity is for Norway.

### 3.6.4. Confusion with regard to reading strategies: a problem in Norway?

In Norway, whether the lack of clarity in the area of reading strategy instruction and research has had major consequences might be a moot point. In fact, Bråten (1997) claims that reading instruction is a problematic issue in all of the Nordic countries, in that Nordic L1 reading pedagogy has largely concentrated on developing decoding skills and developing the students' language awareness. He cites several studies claiming that far too little effort is put into the next step, teaching students how to *read to learn*, which would entail instruction in reading as well as learning strategies (Bråten, 1997, p.103).[23] What this neglect might lead to is exemplified in Fjeldbraaten's above mentioned (1999) study of teachers college students at Oslo University College. Despite systematic instruction, she found it extremely difficult to teach students how to adjust how they read to reading purpose. A particular problem was getting students to shift from their heavy reliance on the careful reading for detailed understanding they had learnt in primary and secondary school. Despite systematic instruction they reverted to this way of reading whenever they came under pressure. This is an example of the problems caused by the focus what Urquhart & Weir (1998) call *careful reading at the global level for comprehension* of the main ideas of a text. They attribute this to careful reading being "the kind of reading favoured by many educationalists and psychologists to the exclusion of all other types. It is associated with reading to learn, hence with the reading of textbooks" (Urquhart & Weir, 1998, p. 103). They claim this focus on one type of reading is problematic in the UK as well, because it prevents students from adjusting how they read to reading purpose.

For the reading of English in Norwegian higher education this may mean that many students do not necessarily have efficient reading skills and strategies to transfer from L1 to L2 reading, even when their language proficiency is above the Linguistic Threshold Level. Not only are upper secondary level reading requirements quite moderate (see Table 2.3), there is little reason to believe that efficient reading

[23] As mentioned in Point 3, this chapter does not go into the issue of learning and learning strategies, but focuses on reading proficiency as a precondition for learning from texts.

strategies and skills are developed in EFL instruction. As discussed in Chapter 2, subsection 2.3.5, the upper secondary Veierød curriculum specified the teaching of study skills, comprising reading skills and strategies in EFL instruction (*Læreplan for den videregående skole. Del 3a Studieretning for allmenne fag*, 1992). Likewise, the R94 EFL syllabi specifies the teaching of reading, in the advanced courses in particular. However, experience shows that such instruction has to be explicit, long term, and comprise a variety of tasks (Bråten, 1997, p. 102). Unfortunately, there little reason to believe that sufficient time and effort, be it in Norwegian[24] or in English instruction, have been devoted to this in competition with other topics in a crowded curriculum. Furthermore, most EFL teachers have little or no expertise in this area. Last, as discussed in subsection 2.4 (see also Table 2.3), the syllabi specify so little reading that it is an open question whether it would allow for sufficient practice, instruction notwithstanding. Since Norwegian institutions of higher education do not offer courses on reading strategies on a systematic basis, this leaves self-study as the only alternative.

## *3.7. Towards a construct definition*

In this chapter I have presented a far from exhaustive overview of the factors and processes involved in reading. Among the former I mentioned background knowledge. This comprises, on the one hand, knowledge of the language, of lexis and grammar, and knowledge of text types, or discourse knowledge. On the other it ranges from general world knowledge to, in this academic context, varying degrees of special knowledge of the topics. Next, the cognitive processes involved in reading that have been mentioned are inferencing, metacognitive monitoring, and reading strategies.[25]

[24] The R94 syllabus for Norwegian comprises modules on study skills at each level. However, the focus of these seems to be more on learning skills than on reading, and the requirements with regard to reading are quite moderate. Furthermore, when faced with a crowded syllabus with a clear emphasis on learning about Norwegian literature and culture, it is doubtful that teachers will put much emphasis on study skills, in particular when few have expertise in this area.

[25] Other factors, such as motivation, reader attitudes, and self-efficacy have not been discussed here for reasons of space. Self-efficacy might in this context be particularly important in that a student's confidence in his or her ability to master English texts can decide whether students attempt to master the reading of these. Motivation and

Though these are all considered important for fluent reading, and for distinguishing fluent from not-so-fluent readers, identifying exactly how and why they affect reading proficiency is problematic.

I have also avoided drawing upon any specific model of reading, here understood as a detailed "descriptive decisions about the relationships between processes, the possible sequencing of processes and the competition for processing resources at any given moment" (Grabe, 1999, p. 26). Instead I have described reading in general, as an interactive process involving primarily lower level (bottom-up) processing, but also drawing upon higher levels (top-down). The basic process involves recognizing the written word – a process that can also involve a top-down aspect, for instance drawing upon the reader's lexicon to access its meaning. Along with syntactic parsing this contributes to the formation of semantic propositions. In higher-level processing these propositions link to form a network, a text model that is comparable to a text summary. This text model in turn interacts with the language, content knowledge, and processing capabilities of the reader to form a situation model, a reader's elaborated interpretation of the text. Reading is fluent to the extent that this process, at the lower-levels in particular, proceeds automatically and leaves as much as possible of the limited processing capacity of the working memory free for higher-level processing. In case of a deficit, for instance an unknown word, the reader can draw "on other knowledge sources, *regardless* of their level in the processing hierarchy. Thus, according to the interactive compensatory model, the poor reader who has deficient word analysis might possibly show a *greater* reliance on contextual factors (Stanovich, 1980, p. 63). However, as Stanovich and others mention, this draws upon the limited capacity of the working memory, which means reduced reading fluency because there is less processing capacity available. The processing limitations of the working memory bring us back to the importance of language knowledge, sight vocabulary and basic structural knowledge in particular. As mentioned above, Perfetti claims that " basic language 'reflexes' account for substantive sources of those differences that are truly reading differences . . ." (Perfetti, 1994, p. 849). For reading in a foreign language developing the required levels of language proficiency required for fluent reading is therefore a key challenge.

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attitudes towards the subject in question, or for instance the use of English in textbooks can also be decisive. These, however, can be considered extraneous factors.

To sum up, what is required to be a good reader is much the same in the first as well as in a foreign language. Grabe (1999) has listed the following abilities for both:

1. fluent and automatic word recognition skills, ability to recognize word parts (affixes, word stems, common letter combinations);
2. a large recognition vocabulary;
3. ability to recognize common word combinations (collocations);
4. a reasonably rapid reading rate;
5. knowledge of how the world works (and the L2 culture);
6. ability to recognize anaphoric linkages and lexical linkages;
7. ability to recognize syntactic structures and parts of speech information automatically;
8. ability to recognize text organization and text-structure-signalling;
9. ability to use reading strategies in combination as strategic readers [ . . .];
10. ability to concentrate on reading extended texts;
11. ability to use reading to learn new information;
12. ability to determine main ideas of a te[x]t;
13. ability to extract and use information, to synthesize information, to infer information; and
14. ability to read critically and evaluate text information (p. 34).

In a Norwegian academic context this list of abilities, which goes beyond parts of the discussion in this chapter, poses a number of challenges with regard to instruction in Norwegian as a first language as well as to EFL, as was discussed in Chapter 2. In fact, this, together with Bråten's (1997, p. 103) criticism of Scandinavian reading pedagogy in general, are issues in clear need of further investigation. This would fall outside the scope of this thesis. I will, however, return to aspects of these issues that are relevant for EFL instruction in Chapter 6 "Discussion" below. In Chapter 4, section 4.3 below, I will go on to relate the construct definition of reading and reading proficiency presented in this chapter to the testing of English reading proficiency.

# 4. RESEARCH DESIGN, TESTS, METHOD, AND SAMPLE

## *4.1. Introduction*

In this chapter, after briefly outlining the study (section 4.1), I present its research design (section 4.2). Third, I describe the tests used to measure reading proficiency and discuss the construct validity of these (section 4.3). Fourth, I discuss construct validity in general (section 4,4) before relating this to the IELTS and self-assessment test scores (section 4.5). Next, I describe the samples, the reference populations and discuss external validity (section 4.6). Last, I include a section on method and statistical conclusion validity (section 4.7).

This exploratory, quantitative study comprises the surveys of five separate samples. Two of these are pilot surveys. The results and analysis of these are presented in Chapter 5, sections 5.2 to 5.6. An overview of the separate surveys, the samples, and their respective sections can be found in Table 4.1 below.

Table 4.1. Overview of the survey samples. The respective sections, time of surveying, type of survey, respondent affiliation, respondent numbers and means used to assess English reading proficiency are presented.

| Sect-ion | Time of survey | Type of survey | Respondent affiliation | Number of respondents | Means used to assess reading proficiency |
|---|---|---|---|---|---|
| 5.2 | Spring 2000 | Pilot, university level students | Østfold University College and the University of Oslo | 66 | Self-assessment |
| 5.3 | Spring 2001 and fall 2001 | Main survey of university level students | University of Oslo, the Faculties of Education, Social Sciences and Natural Sciences | 578 | Self-assessment |
| 5.4 | Fall 2001 | Validation test of university level students | Østfold University College and the Universities of Oslo, Bergen and NTNU, Trondheim | 53 | Self-assessment and an IELTS Academic Reading Module |
| 5.5 | Fall 2001 | Pilot, upper secondary level students | An Østfold County upper secondary school | 21 | An IELTS Academic Reading Module |
| 5.6 | Spring 2002 | Main survey of upper secondary level students | Seven upper secondary schools | 217 | An IELTS Academic Reading Module |

The items used in the questionnaires for all five surveys can be grouped into three categories: dependent variables English reading proficiency and Norwegian reading proficiency; independent variables expected to affect reading comprehension, and items providing information about student background. For the surveys described in sections 5.4, 5.5, and 5.6, an IELTS Academic Reading Module test (see subsection 4.3.3) was used together with a questionnaire.

As will be discussed in more detail below, a number of factors, practical as well as theoretical, affected not only the means used to assess reading proficiency, but constrained the selection of respondents and thereby sample sizes and how representative they are. I will, nevertheless, argue that the use of repeat sampling which allows the testing of identical variables across five different samples partially offsets these limitations. Furthermore, including samples with respondents from the university level as well as with senior, upper secondary students offers the possibility

to take factors such as attrition, selection and time lag into consideration when interpreting the data (see section 6.1 below).

## *4.2. Research design*

Ideally, investigating the academic English reading proficiency of Norwegian students calls for a quantitative approach based on surveys of a representative sample (or samples) of the reference populations and the statistical processing of the data. This could be supplemented with experiments and interviews of small or selected samples. Unfortunately, time and resources constrained the study to the surveying of five convenience samples (see section 4.6). These, however, comprise samples from two reference populations, students in the General Studies branch of upper secondary school on the one hand, and university level students on the other.

Another constraint was the fact that all respondents would have completed, or be in the process of completing EFL instruction prior to the surveys or tests. Therefore, neither pre-testing nor random assignation between control and experimental groups were possible. This meant using a quasi-experimental, one-group, post-test design (see Shadish, Cook, & Campbell, 2002, pp. 106-107). This design, with or without a pre-test, is frequently used in the Social Sciences. Unfortunately, it is of limited utility for the identification of causal relations, especially the one-group post-test design where the "absence of a pretest makes it difficult to know if a change has occurred, and the absence of a no-treatment control group makes if difficult to know what would have happened without treatment" (Shadish, Cook, & Campbell, 2002, p.106).

The inherent limitations of one-group, post-test design does not necessarily mean that all instances of covariation found in this study do not reflect cause and effect: some probably do and can lead to hypotheses about causal relations. What it does mean is that this design does not allow for the satisfactory "identification and study of plausible threats to internal validity" needed to identify such causal relations (Shadish, Cook, & Campbell, 2002, p. 105). The statistical analysis of the data in this exploratory descriptive study will therefore concentrate on presenting mean scores, score and respondent distributions, and covariations between dependent and independent variables in and across the five samples. In Chapter 7, section 7.1,

however, I will draw upon the findings to suggest future experiments and designs to test hypotheses about possible casual relations that are generated by this study.

## *4.3. Test design and construct definition*

As described in Chapter 3, the English reading proficiency required of Norwegian students in higher education involves a complex set of skills and abilities as well as linguistic and factual knowledge. This makes reading tests the best means of testing such proficiency. Unfortunately, most reading tests are time and effort consuming, which makes it difficult to find university level respondents willing to spend the necessary time and effort. Another problem is that student reluctance to participate might lead to skewed results; that is to say if too few out of a randomly selected, representative group of respondents show up for the test. Alternatively, it may only be those who feel comfortable with their level of proficiency who volunteer. Third, practical difficulties, such as finding rooms and having to recruit and pay respondents for their efforts may also prove problematic, especially at the university level. As described in section 5.4 below, all these factors, the reluctance to volunteer in particular, made it difficult to recruit university level students for a reading test.

For the university level I therefore attempted to surmount this difficulty using an approach combining short questionnaires for the larger groups of respondents with reading tests for a smaller number. These two approaches will be described in more detail below.

The advantage of using short and easy-to-fill-in questionnaires is that they could be handed out and filled in during lectures and collected immediately afterwards, thereby ensuring a high rate of return (see sections 5.2 and 5.3). This meant using self-assessment items to measure reading proficiency, which could then be validated using a smaller group of respondents (see section 5.4) and the internationally recognized IELTS Academic Reading Module from the University of Cambridge Local Examinations Syndicate (UCLES). At the upper secondary level easier access to entire groups and classes meant that the IELTS reading test could be used in combination with questionnaires for all respondents (see sections 5.5 and 5.6).

### 4.3.1. The reading tests

As noted above, I used two means of testing reading proficiency: self-assessment items and the IELTS Academic Reading Module. In the following I will relate these to the underlying theory – or construct definitions – behind these tests. Next I will explain how these constructs are operationalized as tests and test items. Then I will briefly discuss the crucial issue of construct validity for these two tests. This is what S. Messick (1995) describes as "the evidence supporting the trustworthiness of score interpretation in terms of explanatory concepts that account for both test performance and score relationships with other variables" (p. 743).

**The reading construct**

In *Assessing Reading* Alderson (2000) defines a construct as a "psychological concept" derived "from a theory of the ability to be tested" that can be used for testing purposes (p. 118). It may be "a definition which focuses on an aspect of the ability that is of particular relevance to our testing purpose, or it may be a definition that we adopt wholesale from previous research or practice" (p. 119).

The definition of the reading construct used in this study can be found in Chapter 3, section 3.7. Reading is there described as an interactive process involving primarily lower-level (bottom-up) processing which serves as a basis for the construction of meaning involved in higher-level processing. Lower-level processing involves the automatic recognition of words and relevant grammatical information. Word recognition and syntactic parsing then contribute to the formation of semantic propositions. At a higher-level of processing relevant propositions link to form a network, a text model that is comparable to a text summary. This text model interacts with the language, content knowledge, and processing capabilities of the reader in a process involving the making of inferences, monitoring comprehension, and the ability to read strategically. This leads to the formation of a situation model, a reader's elaborated interpretation of the text.

Reading is fluent to the extent that this process proceeds automatically, leaving as much as possible of the limited processing capacity of the working memory free for higher-level processing. To resolve a deficit in understanding, for instance when faced with an unknown word or expression, Stanovich (1980) claims that the reader can make use of "other knowledge sources, *regardless* of their level in the

processing hierarchy" (p. 63). Having to do so, however, draws upon the limited capacity of the working memory. This may reduce reading speed and fluency.

### 4.3.2. The self-assessment test - operationalization

Research shows that self-assessment can provide reliable and valid pictures of skills and/or levels of proficiency in low-stakes contexts. A key requirement is that, "[s]elf-assessments are more accurate when based upon task content tied to students' situations as potential users of the language in question" (Bachman, 1990, p. 148; Oscarson, 1997, pp. 182-183). In this study this requirement also influenced respondent selection, since answers to the self-assessment questions would be invalid unless the respondents in question had actual experience reading university level English texts and textbooks.

With regard to the phrasing of self-assessment items, L. Bachman (1990) claims that:

> self-relating questions that ask test takers to judge how difficult various aspects of language use are for them appear to be better indicators of specific language abilities than are questions that ask how well they can use various aspects of language (p.148)

In this study I followed the latter requirement and wrote self-assessment items asking respondents to indicate levels of experienced difficulty with different aspects of reading. Based upon experience with a pilot survey (see section 5.2), I made six comparable items using seven point Likert scales where 1 indicates the maximum level of difficulty and 7 no difficulty at all (items 40 to 45, see Appendix 2). The English versions of the items in question are presented in Table 4.2 below. The questionnaire includes comparable items for the reading of Norwegian (items 34 to 39, see Appendix 2).

Table 4.2. Self-assessment items 40 to 45, Appendix 2.

40. How **quickly** do you **read English** texts on your reading lists? (Give only one answer)

Very slowly — Quickly and easily
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

41. Indicate on the scale from 1 to 7 **how many words you do not understand** in the **English** texts on your reading lists.

All the words are unfamiliar — All the words are familiar
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

42. Indicate on the scale from 1 to 7 to what extent you find the **sentences in the English texts** difficult to understand.

All sentences are impossible to understand — All the sentences are understandable
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

43. Indicate on the scale from 1 to 7 to what extent you **find the English texts coherent*** when reading.

No coherence at all — All the texts are coherent
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

44. Indicate on the scale from 1 to 7 to what extent the **information in the English texts is so densely presented** that it hinders your understanding of the contents.

Impossible to understand — Everything is understandable
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

45. Indicate on the scale from 1 to 7 to what extent you find **the contents of the English texts understandable**.

Impossible to understand — Everything is understandable
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

*The Norwegian version is as follows: "Kryss av punktet på skalaen fra 1 til 7 som viser i hvor stor grad du får **sammenheng i den engelske faglitteraturen** mens du leser." This is translated as**: find the texts coherent**, to understand the text as a consistent whole.

These items are intended to tap different levels of the reading process/construct described above. Items 41 and 42 query respondents about their difficulties with word recognition and syntactic understanding, areas crucial to lower-level processing. Next, item 40 asks about reading speed as an indication of fluency. A high score would here indicate quick and easy reading, a low score slow and laborious reading reflecting difficulties with word recognition and/or syntactic parsing and the need to use compensatory strategies. Difficulties finding coherence in the text when reading (item 43), or with dense presentation of information (item 44) tap possible difficulties with

text model formation. Last, item 45 on content understanding is an indicator of difficulties at the level of situation model formation.[26]

Since each of these items measures a different facet of the same construct, reading proficiency, they can be combined into additive indices to serve as a single dependent variable. Using additive indices simplifies analysis by making it possible to use one instead of several items as indicators of the same underlying trait. This also helps reduce the effects of possible measurement errors and improves both validity and reliability (Hellevik, 1999, pp. 303-310). The reliability, or to be more exact, the internal consistency of the items in such an index can be tested using the Cronbach-Alpha test. The resulting alpha-coefficient ($\alpha$), expresses how precisely a set of indicators measure the same underlying trait (Crocker & Algina, 1986, pp. 119-121). While an $\alpha$ =.5 is considered low, and high if $\alpha$ =.8 or above, it should be kept in mind that this value depends upon the correlations between items on the one hand, and the number of items on the other. As will be seen in sections 5.3 and 5.4 in this study, the coefficients for the six items in the self-assessment indices are high, $\alpha$ = .94 and .92 respectively. This reflects higher inter-item correlations for the six items than do comparable alpha-coefficients for the IELTS Academic Reading Module with 38 items.

However, a high alpha-coefficient is no guarantee of the underlying trait being measured is identical with the construct the items are intended to measure. This falls under the rubric of construct validity, to be discussed in more detail below.

### 4.3.3. The IELTS Academic Reading Module: Development, operationalization, and construct definition

**The IELTS test**

[26] As Grabe (1999) points out, the situation-model level that item 45 is an indicator of is less well understood than the lower level processing and the text model levels. This is because understanding at the situation model level might be influenced by other factors than just reading proficiency, for instance the difficulty of the subject in question or the respondent's level of intelligence. Nevertheless, for the samples in sections 5.3 and 5.4 this item correlates well with the other five items.

The University of Cambridge Local Examinations Syndicate (UCLES), The British Council, and IELTS Australia jointly manage the International English Language Testing System test (IELTS). It is used for admission purposes by Australian, British, Canadian, and New Zealand institutions to test the English proficiency of students for whom English is a foreign language. According to the IELTS website (http://www.ielts.org/) the test is becoming recognized by increasing numbers of US institutions as well.[27] The test is also used for the admission of international students to some of English medium programs at some Nordic universities (Hellekjær & Westergaard, 2003).

The IELTS tests comprise four modules. All candidates take the same Listening and Speaking Modules, but can choose between Academic or General Training Reading and Writing modules. The Academic modules are suitable for candidates planning to undertake higher education while the General Training modules are for candidates planning to undertake non-academic training, gain work experience, or for immigration purposes. Specially trained examiners rate the speaking and writing modules, whereas the reading and listening modules are rated by clerical non-specialist staff. Results are calculated on a nine-point scale, with Band 1 the lowest and Band 9 the highest. This is done for the separate modules and for the test as a whole. Admission requirements vary between institution and studies, but generally Band 6 or better is required.

This study uses only the Reading for Academic Purposes Module. UCLES granted permission to use a specimen test that IELTS claims is identical in difficulty to comparable tests (UCLES, 2001a, 2001b). The conversion tables used to calculate Band scores were not available. Results are therefore tallied as correct or incorrect answers, and combined into additive indices to serve as dependent variables. The alpha-coefficients from the three samples in question are displayed in Table 4.3 below.

Table 4.3. Alpha-coefficients for the IELTS Academic Reading Module scores. There are 38 items.

| Samples | N | ∝ |
|---|---|---|
| Section 5.4 | 53 | .93 |

[27] A list of institutions recognizing the test can be found at <http://www.ielts.org/recognition.cfm>, accessed 12 May 2003.

| | | |
|---|---|---|
| Section 5.5 | 21 | .88 |
| Section 5.6 | 217 | .92 |

**The reading construct underlying IELTS and operationalization**

An explicit construct definition underlying the IELTS Academic Reading Modules is not available. J. C. Alderson and C. Clapham, who took part in the development of these, explain that this is because the experts consulted provided responses that were too "varied, contradictory, and inconclusive" (Clapham, 1996, p.76). Instead, they used a more pragmatic approach:

> We were obliged to take an eclectic approach to the establishment of specifications for our test writers. This meant that we selected those aspects of the different responses which we judged to be practicable, to fit our brief (in particular, to maintain a degree of continuity with the existing test) and to correspond with our other sources of information and opinion. The result is far from being a theoretically pure model of language proficiency[28], and perhaps the most we can claim for our underlying construct is that it does not appear to contradict or conflict in any serious way with what theorists and empirical research have revealed as the nature of language proficiency (Alderson, 1992, p. 164 as cited by Clapham, 1996, p. 77).

In the following I therefore use an alternative approach to gain an idea of the reading construct underlying the IELTS test. This will be to examine the test texts and test items and work backwards from how underlying reading construct is operationalized as test items.

The IELTS Academic Reading Modules use a combination of three different texts of varying difficulty from different subject areas. The areas are Business Studies and Social Sciences (BSS), Physical Science and Technology (PST), and Life and

[28] It is interesting to note that the IELTS reading test is here referred to as a test of *language*, not *reading* proficiency, which reflects Perfetti's (and others) claims that language-processing skills are the primary variable affecting reading comprehension (Perfetti, 1994). Nor does this focus on language conflict with the construct definition in section 3.7 above in which word recognition and syntactic parsing are deemed crucial to fluent reading.

Medical Sciences (LMS). In the specimen test used for this study one is from Geology, one is a Business text, and the third a Technical text, each about 900 words long (UCLES, 2001a). They are "intended to be authentic texts for students in the relevant academic disciplines. They must come from authentic sources, but they can be modified to remove ambiguities and grammatical errors" (Clapham, 1996, p. 77). The texts seem roughly comparable to beginner level textbooks used at the university level with regard to subject matter and language.

IELTS tests are made according to strict guidelines. Topics or contexts of language use that may bias the test against any group of candidates are avoided. Items are compiled into pre-test papers, these are pre-tested, and texts with known measurement characteristics are placed in an items bank from which they are used to make trial papers. IELTS also works systematically to ensure that tests are of equal difficulty. In UCLES (2002b), they mention that they apply:

> [a] procedure known as Standards fixing . . . in which the Trial Papers are administered to representative groups of IELTS candidates and the results analysed in order to allow accurate Band Score conversion tables to be constructed. Standards fixing is necessary to ensure the equivalence of Listening and Reading versions and the reliability of the measurement of each paper (p. 24).

The reliability of the Academic Reading Modules is measured using the Cronbach-Alpha test. For the six new tests released in 2002, for instance, IELTS mentions that the coefficients vary from $\alpha = .79$ to .88 for 40 items, with an average of $\alpha = .85$ for the Academic Reading modules (UCLES, 2002a , p. 6). It would seem that these are calculated on the basis of the total number of the answered tests. Unfortunately, IELTS could not provide the alpha-coefficient for the 38-item specimen version of the Academic Reading Module used in this study.[29]

The subject areas of the test texts are an important issue. Students and institutions might desire or expect tests relevant to their selected areas of study. There is also reason to assume that they will actually do better with texts from their subject areas. The developers of IELTS, however, found it "administratively impossible" to

[29] E-mail communication with IELTS Validation Officer Martin Robinson.

produce the large variety of tests that subject specificity would require. Nor did the developers find any "evidence to support ESP testing claims that different disciplines demand different linguistic skills, and that students are disadvantaged if they take a test which is not in their subject area" (Clapham, 1996, p. 59). They therefore decided to use texts from three broad subject areas only, BSS, LMS, and PST. Clapham (1996) explains this as follows:

> The theory underlying this test is therefore that academic students will give the most accurate evidence of their academic reading ability if they are given reading tests in their own broad subject area. IELTS is an ESP test in so far that it is specifically designed for students proposing to undergo academic study. It is an ESAP[30] test in that it provides tests in three broad subject areas (p. 77).

The tasks for each text are designed to measure the test taker's ability to perform a number of tasks for academic purposes, such as "(1) identifying structure, sequence of events and procedures, (2) following instructions, [and] (3) finding main ideas which the writer has attempted to make salient" (Clapham, 1996, p.78).

In the specimen test used items vary from matching paragraphs and headings, agreeing or disagreeing with given statements in relation to the text in question, to stating that there is no relevant information in the text on a particular subject or filling in Tables or graphs using information in the texts. The reading module is to be completed in 60 minutes. In practice this will require students to read fairly quickly and vary how they read according to their purpose, such as scanning to find a key date or reading carefully to find a piece of information. Instructions are in English, with definite requirements about how to answer; for instance using no more than three words in the answer, answers using letters or Arabic or Roman numerals, or choosing between the alternatives yes, no, or not given. The strict requirements with regard to answering are due to the practical constraint of having the tests scored by clerical, non-specialist staff using a checklist of acceptable answers. It is an advantage, of course, that this makes for higher inter-rater reliability.

[30] ESP is the acronym for English for Specific Purposes, ESAP for English for Specific Academic Purposes. See Clapham, 1996, Chapter 1, for more detailed discussion.

To return to the underlying IELTS reading construct, closer examination of the test items shows that the most demanding of the IELTS test items, for instance items 23, 24, and 25 in Appendix 4, require respondents to make use of previous knowledge, both of content and of genre and text type, to interpret and understand the texts. Furthermore, these and other items draw upon the ability to make correct inferences needed for understanding, to read strategically, and to use metacognitive processing – the ability to monitor and realign comprehension while reading (see 3.6 above). In addition, the one-hour time limit allotted for the reading of three texts and the answering of 38 to 40 items gives an indirect measure of reading speed – the slower the respondent the more unanswered items.

In sum, a closer examination of the IELTS Academic Reading Module texts and test items shows that they can be related to the reading construct described in Chapter 3 above in that they focus on testing the respondents' reading proficiency at higher processing levels (see subsection 3.4.3 above) using authentic, academic texts with topics from three different areas. As mentioned in Chapter 3, Grabe (1999) claims that at this level of processing, the situation model level, there still is a degree of uncertainty about the relevant components in the reading process and their interaction. Nevertheless, it should be safe to conclude, as do Alderson and Clapham, that the "underlying construct . . . does not appear to contradict or conflict in any serious way with what theorists and empirical research have revealed as the nature of language proficiency" (Alderson, 1992, p. 164 as cited by Clapham, 1996, p. 77).

## *4.4. Construct validity*

Whether tests and test scores used give a valid "picture" of the construct in question is a crucial issue for testers. This introduces the need to carefully evaluate – or validate – the tests used. Messick (1996) puts this as follows:

> Test validation is empirical validation of the meaning and consequences of measurement, taking into account extraneous factors in the applied setting that

> might erode or promote the validity of local score interpretation and use. Because score meaning is a *construction* that makes theoretical sense out of both the performance regularities summarized by the score and its pattern of relationships with other variables, the psychometric literature views the fundamental issue as *construct validity* (p. 246).

To give an example, it would be relevant to ask whether the self-assessment scores used to measure reading proficiency reflect degrees of respondent frustration about having to read English texts more than actual variation in the respondents' reading proficiency. If so, this would be an example of *construct under-representation*, that "assessment is too narrow and fails to include important dimensions or facets of the construct" (Messick, 1995, p. 742). Scores may also be influenced by irrelevant factors: It has been claimed that Norwegian students tend to overestimate their English skills, which may, of course, affect self-assessment scores (Lehmann, 1999). Alternatively, student unfamiliarity with the IELTS test format might affect results negatively. These would be examples of *construct-irrelevant variance*, that assessment contains "excess reliable variance associated with other distinct constructs as well as method variance such as response sets or guessing propensities that affects responses in a manner irrelevant to the interpreted construct" (Messick, 1995, 742).

To rule out construct invalidity it is imperative to gather enough compelling evidence to make "an overall evaluative judgment of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of interpretations and actions based on test scores" (Messick, 1996, p. 245). This process involves the "integration of multiple complementary forms of convergent and discriminant evidence" in which "six distinguishable aspects of construct validity are highlighted as a means of addressing central issues implicit in the notion of validity as a unified concept" (Messick, 1996, p. 248). In what is known as Messick's unified framework for validation, these six aspects of construct validity: content, substantive, structural, generalizability, external and consequential validity "function as general validity criteria and standards for all educational and psychological measurement" (Messick, 1996, p. 248). In the following I look at these in turn.

### 4.4.1. The content and substantive aspects of validity

Content validity means that the knowledge, skills, and other factors assessed are relevant to the construct domain in question. This can be examined through, for instance, job or task analysis, curriculum analysis, or, most importantly, domain theory. In this study reading theory as described in Chapter 3 would be an example of the latter.

How representative the tasks selected are is also important. That is to say, the extent to which the tasks selected "sample domain processes in terms of their functional importance "(Messick, 1996, p. 249). Examples here would be the IELTS test's selection of text topics and whether the test items sample student reading in a manner that reflects "real world" academic reading.

One way of assessing content validity is by using experts to evaluate whether a test samples the domain appropriately, and with reasonable coverage. The requirement of *substantive validity,* however, introduces an additional aspect. This is the need to provide empirical evidence that the processes sampled, and the variations or consistencies in performance revealed by the scores in question, have bearing on the domain in question. An example from this study would be finding empirical data indicating that the self-assessment scores used in the studies in sections 5.3 and 5.4 measure actual reading proficiency – not just frustration with having to read textbooks in English instead of in Norwegian.

### 4.4.2. The structural aspect of validity

Messick (1996) explains the implications of the structural aspect of validity as follows: "the theory of the construct domain should guide not only the selection or construction of relevant assessment tasks but also the rational development of construct-based scoring and rubrics" (p. 250). For reading, an example of such a theoretical consideration could be the importance of reading speed seen together with the limitations of working memory. That is to say, if the readers have a large sight vocabulary and process the text easily and automatically, reading will be fast and fluent. If not, for instance if the readers struggle with many unknown words, reading speed will decrease. Testing reading speed is, advertently or inadvertently, an integrated aspect of the IELTS tests, operationalized by combining a large number of

test items with a one-hour time limit. Thus, a slow reading or processing speed will be reflected in the number of unanswered items.

### 4.4.3. Generalizability as an aspect of validity

Generalizability concerns whether, and to what extent the interpretation of the scores is, or is not, valid beyond the test itself to the construct domain in question. Finding "[e]vidence for such generalizability depends on the degree of correlation of the assessed tasks with other tasks representing the construct or aspects of the construct . . . across tasks and contexts (Messick, 1996, p. 250) .

There are two key aspects to generalizability: transfer and reliability. Generalizability as transfer depends on the performance of the test across tasks that are representative of the construct domain. To use reading as an example, the extent to which IELTS test scores correlate with academic reading in general, for instance in other subjects than in the three reading texts in the tests, would be an example of transfer generalizability.

The other key aspect of generalizability is reliability: to what extent a particular test gives consistent results, for instance with different raters. For example, using cloze tests, multiple choice items or Likert scales to measure reading proficiency will give high inter-rater reliability. However, this reliability can come at the expense of transfer generalizability, to the extent that item scores do not reflect actual reading performance in other contexts due to lower content validity. An example here could be using multiple-choice items where respondents can choose between alternative answers in the IELTS Academic Reading Module (see Appendix 4). This could further improve reliability, but these items would to a lesser extent reflect actual reading performance and would therefore have lower transfer generalizability.

### 4.4.4. The external aspect of validity

External validity refers to whether the scores from the constructs represented in the assessment and the domain theory upon which they are based, can account for external patterns of correlations. An example from this study would be the importance of sight vocabulary for fluent and efficient reading.

### 4.4.5. The consequential aspect of validity

In an educational perspective, testing can have negative or positive consequences. IELTS is, as mentioned, used to ascertain whether students have the academic English proficiency needed to study in countries or programs where teaching is in English. For students who fail the test this means that they are prevented from starting courses or programs for which they lack the required English proficiency. It is therefore of crucial importance that students are excluded due to poor language proficiency, not due to test invalidity. If so, this would entail unacceptable personal consequences for the students, and not to mention have economic impact on the institutions in question. Thus, focusing on the consequential aspects of a test serves to underline the need to design and evaluate tests to assure construct validity.

### 4.4.6. A unified framework of construct validity

Test validity does not hinge on all or any of the six aspects of construct validity: on content, substantive, structural, generalizability, external and consequential validity. Nor must a conclusion be based on all of these general validity criteria, "granted that there is defensible convergent and discriminant evidence supporting score meaning" (Messick, 1996, p. 253). If one area of evidence is difficult to develop, for instance due to small sample sizes, heightened emphasis can be put on other areas. Messick (1996) sums this up as follows:

> What *is* required is a compelling argument that the available evidence justifies the test interpretation and use, even though some pertinent evidence has to be forgone. Hence, validity becomes a unified concept and the unifying force is the meaningfulness or trustworthy interpretability of the test scores and their action implications, namely, construct validity (p. 253).

## *4.5. The construct validity of the IELTS and self-assessment test scores*

In the following I will discuss the construct validity of the two tests of reading proficiency used in this study, starting with the IELTS Academic Reading Module.

### 4.5.1. IELTS and validity

To begin with I do not consider a detailed examination of the IELTS test with regard to construct validity necessary. One reason is because IELTS is an internationally recognized test of academic reading proficiency where the consequential aspect of test invalidity would have practical and economic consequences for the institutions that rely on it. Second, IELTS provides convincing documentation with regard to test design and validity, including several predictive validity studies. In UCLES (2000) this is stated as follows:

> A number of predictive validity studies have been carried out on IELTS (see IELTS Annual Report 1995, IELTS Annual Review 1998/9) which conclude that language proficiency is an important factor in academic success and that IELTS is a useful predicator of a student's ability to cope with academic English (p. 22).

Third, there is Caroline Clapham's (1996) description of the development of the IELTS and analysis of key aspects of the test, as noted above.

There is, however, one aspect of the IELTS test that should be mentioned here, namely the *substantive validity* of the test scores (see 4.4.1). This is the need for empirical evidence that the processes sampled, and the variations or consistencies in performance revealed by the scores in question, have bearing on reading proficiency and that they are not unduly affected by extraneous factors such as for instance test unfamiliarity. Whether the scores can be attributed to test unfamiliarity instead of poor reading proficiency is highly relevant for the low IELTS scores respondents achieved in the surveys in sections 5.5 and 5.6, this because Norwegian students are unfamiliar with closed response formats. However, experience with international surveys that include both closed and open response formats shows that Norwegian students do not seem particularly disadvantaged by closed compared to more open formats (Lie, Kjærnsli, & Brekke, 1997; Lie, Kjærnsli, Roe, & Turmoe, 2001). Of course, it cannot be excluded that many respondents in the present study might have

achieved higher scores if they had had more experience with the task types in the IELTS test. However, in this study respondent unfamiliarity with the test format should, at least partly, have been offset by the students getting more than the 60 minutes IELTS considers necessary to complete the Academic Reading Module. Furthermore, the results in sections 5.4, 5.5 and 5.6 below also argue for the scores reflecting actual variations in reading proficiency. The sample in the survey presented in this section 5.6 comprises 217 respondents from senior classes of the General Studies branch of the upper secondary. Of these, 178 students had ordinary EFL instruction only, while 39 respondents had had a single, sheltered CLIL class. In the latter sub-sample two thirds attained IELTS scores equivalent to Band 6 or better (Figure 5.12). In comparison, two thirds of the 178 with ordinary EFL instruction scored on or below this level (see Figure 5.11). It is possible that selection factors due to the requirement for volunteering for CLIL courses (see 2.3.2), can in part explain the higher scores for this sub-sample. On the other hand, these 39 respondents were no more familiar with the IELTS test format than the other 178.

Taking into consideration the extra time allotted for the test, the experience with other international surveys, and the high scores of the CLIL sample, I would argue for the substantive validity of the IELTS scores, that they reflect actual variations in reading proficiency more than test unfamiliarity. I will therefore conclude this discussion by arguing for the overall construct validity of the IELTS test scores in this study.

### 4.5.2. Self-assessment items and validity

Unlike the IELTS Academic Reading Module, the self-assessment items used as indicators of reading proficiency were developed for this study and therefore require further analysis. In the following I will present my main arguments for the construct validity of these items, as well as their limitations.

**Previous research**

My first argument is previous research on self-assessment. Research validation studies are almost unanimous in claiming that self-assessment can provide a valid assessment of skills in low-stakes contexts (Bachman & Palmer, 1989; Oscarson,

1989). In a more recent literature review Oscarson (1997) concludes that "although no consensus has been reached on the merits of the self-assessment approach, a clear majority of the studies surveyed report generally favourable results" (pp. 182-183).

With regard to item design Oscarson mentions that "[s]elf-assessments are more accurate when based upon task content tied to students' situations as potential users of the language in question" (p. 183). Bachman (1990) puts this as follows:

> "self-relating questions that ask test takers to judge how difficult various aspects of language use are for them appear to be better indicators of specific language abilities than are questions that ask how well they can use various aspects of language (p. 148).

As mentioned in subsection 4.3.2 above, these two criteria guided the design of the items used in this study (see Table 4.2). The requirement that self-assessment items be related to tasks respondents have actual experience with, however, introduces a limitation in this study: the construct validity of the self-assessment scores depends upon the sample surveyed. In other words, the scores from these items will only be considered valid for respondents who can refer to their actual experience of reading English texts in a university level context.

**Construct validity criteria**

To continue with *content validity,* the main argument for these items giving useful and valid information about reading proficiency is their being closely based upon a theory of reading as described in Chapter 3, designed as they are to tap different levels of the reading process. Furthermore, though they to a certain extent mirror actual, real-world reading processes such as search reading to find requested information, the items also refer to the respondents' actual experience of reading English texts and textbooks in an academic context at a general level. Though phrased as questions about more general aspects of reading, such as degrees of ease or difficulty with unknown words and difficult sentences, these should, nevertheless, be relevant to "real world" aspects of reading.

This brings in the *substantive aspect of validity,* empirical evidence indicating that the variations and inconsistencies in the scores in question are relevant to academic reading. I mentioned as an example that the self-assessment scores might

just as well reflect the respondents' frustration with having to read in English instead of in Norwegian instead of actual reading difficulties. This, however, is examined in Section 5.4, subsection 5.4.3 by testing student self-assessment scores against scores on the IELTS reading test. A correlation of r= .72 ($p<.01$, N= 53) between the additive index for the self-assessment items and the IELTS Academic Reading Module should go to indicate that the scores first and foremost mirror actual reading proficiency. It also reflects the r= .7 to .8 bivariate correlations Oscarson (1997) reports from other validation studies of self-assessment. However, it should be kept in mind that a correlation of r= .72 means that only 50% of the variance between the IELTS and self-assessment scores is shared. In other words, a correlation of r= .72 with an actual reading test is still not high enough for uncritical comparisons. This reservation notwithstanding, I will on the basis of this correlation, when seen together with the high alpha-coefficients for the six items in sections 5.3 and 5.4, argue for the substantive validity of the scores from these self-assessment items.

The *structural aspect of validity,* deals with to what extent "the internal structure of the assessment (i.e., inter-relations between the scored aspects of task and subtask performance) is consistent with what is known about the internal structure of the construct domain" (Messick, 1996, p.250). As mentioned, the self-assessment items draw upon reading theory and attempt to tap different aspects of the reading process as experienced by the respondents. Next, the high alpha-coefficients indicate that the items measure the same underlying trait, which is reasonable in the light of what is known about the reading process. Third, it can also be argued that the seven point Likert scales allow sufficient flexibility in rating in degrees of ease or difficulty to ensure that individual variation between scores on the different items is reflected in the additive indices. To go beyond this, for instance to accord different weighting for different items would require careful analysis in a separate study. The arguments for structural validity must therefore rest on the items being based upon a theory of reading, and the high correlation between these and the carefully designed IELTS Academic Reading Module.

With regard to the *reliability aspect of generalizability,* it is easy to argue that the self-assessment items used are easy for the respondents to understand, easy to tally by different raters, and their internal consistency is testable using either the Cronbach-Alpha test, or factorial analysis. For *transfer generalizability* the main

argument is the high correlation between the self-assessment indices and the IELTS test.

Next is the *external aspect of validity.* This concerns whether scores in the light of theoretical knowledge of reading can account for correlations for external patterns of correlations. As can be seen in section 6.1, Table 6.8, the self-assessment indices and IELTS scores show much the same patterns with regard to correlations with a number of independent variables. These correlations can also be explained on the basis of current knowledge of the reading process in the context of academic reading in higher education.

### 4.5.3. Summary: The construct validity of the IELTS and the self-assessment items

More detailed analysis could, of course, provide additional information on the different aspects of construct validity of both the IELTS test and the self-assessment items. One issue which has hardly been mentioned is the *consequential aspect of validity*, which highlights the need to assure the construct validity both tests used to assure that the possible consequences, positive or negative, are not due to construct invalidity. For this study, it remains to be seen whether the findings from the tests used in this study influence Norwegian syllabi, examinations, and possibly, EFL instruction in general, whether positive or negative.

To sum up, I believe that the "general validity criteria and standards for all educational and psychological measurement" (Messick, 1996, p. 24), discussed above support the claim that the scores from both the IELTS test and the self-assessment items give useful and valid information about the respondents' academic English reading proficiency. With regard to the self-assessment items, as has been mentioned above, these are only valid for respondents at the university and college levels with actual experience reading English texts on their reading lists. Further conclusions about the study as a whole depend not only upon the construct validity of the tests in question, but also on external validity and statistical conclusion validity as well. This will be discussed in more detail in sections 4.6, and 4.7 below.

## *4.6. Reference populations, samples, and external validity*

### 4.6.1. The reference populations

The reference populations for this investigation are on the one hand Norwegian upper secondary students in branches qualifying for higher education, also known as achieving "study competence." On the other, we have students in higher education, the majority being from 19 to 25 year old.[31]

As in comparable countries, the general trend in Norway has been that an increasing proportion of each age cohort leaving upper secondary has gone on to higher education. While there were about 10,000 students in higher education in 1960, this had trebled to 30,000 by 1970, increased to 80,00 in 1980, and exceeded 130,000 in 1990 (Hatlevik & Norgård, 2001, p. 30). By 2001 this number had increased to 197,614.[32] Since the late 1980s this increase in university level student numbers has continued in spite of smaller age cohorts. After the 1994 Curriculum Reform this trend can in part be explained by the percentage of upper secondary students qualifying for higher education. A look at the proportion of students completing upper secondary shows that in 1980 25,000 out of a total of 70,000 achieved "study competence." By 1992 this number had increased to 35,000 out of a smaller age cohort before declining to 30,322 in 2000.[33] With regard to the number of 19 year olds who go directly to college and university, 2002 figures show that 26% of this cohort went on to higher education the same fall. This proportion can be expected to increase further as the men complete military service or because many decide to work or have a "wanderjahr" before starting on their education.[34]

Students who apply to higher education can choose between universities, or state, military or other types of colleges, both public and private. The distribution of students between these from 2001 is displayed in Table 4.4 below.

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[31] Statistics Norway, available at http://www.ssb.no/utelstud/tab-2002-10-04-09.html, accessed June 2003.

[32] Statistics Norway, available at http://www.ssb.no/aarbok/tab/t-040240-190.html, accessed June 2003.

[33] Statistics Norway, available at http://www.ssb.no/emner/04/utdanning_as/200109/t-2.4.html, accessed July 2003.

[34] Statistics Norway, available at http://www.ssb.no/emner/04/02/30/vgo_kostra/tab-2002-09-25-04.html, accessed July 2003.

Table 4.4. Students at Norwegian institutions of higher education, 2001, absolute numbers and percentages.

| Total number of students in 2001 | Universities | State colleges | Military colleges | Other colleges |
|---|---|---|---|---|
| 197, 614 (100%) | 81, 358 (41.2%) | 90, 264 (45.7%) | 574 (0.3%) | 25, 418 (12.9%) |

Source: Statistics Norway, available at http://www.ssb.no/utelstud/tab-2002-10-04-09.html, accessed June 2003.

### 4.6.2. The upper secondary level samples

An optimum sample for the surveying of the Academic English reading proficiency of Norwegian students would be a reasonably large and randomly selected sample of third year, upper secondary students in branches qualifying for higher education. Though this remains a future option, it was not done in this study for two reasons. The first was the need to find and/or develop appropriate research instruments, the second was the need for an exploratory survey to justify and gain support for such an effort. The latter could also contribute towards the design and implementation of supplementary tests and experiments that could compensate for the limitations of a quasi-experimental, one-group, post-test design with regard to identifying causal relations. Although students' right to choose elective courses at the upper secondary level precludes random assignation to experimental and control groups, it should be possible to use a quasi-experimental design with pre and post-tests for smaller groups.

In this study it was first and foremost time pressure and limited resources that limited the numbers of students and classes. After piloting the test at a school in Østfold County (see section 5.5), I contacted teachers at 10 upper secondary schools in different parts of Norway, avoiding Oslo schools because of the variation between popular and less popular schools with regard to admission requirements.[35] I asked for help in finding a third-year class that could take part in the survey, and specifically requested mixed groups with regard to English courses. Testing a class where all students had the Advanced English Course was to be avoided if at all possible. Three of the schools were also contacted because they had CLIL courses, more pecifically Modern History taught in English, where I wished to compare student scores with those from non-CLIL groups. At these schools I asked for one CLIL and one non-

[35] In Oslo students can apply to any upper-secondary school they wish. There is therefore systematic variation between schools with regard to student qualifications.

CLIL class. Two of the schools with CLIL subjects and five of the others, seven schools in all, agreed to take part. This gave a convenience sample comprising 217 respondents, 39 with CLIL subjects and 178 with ordinary EFL instruction only (see Table 5.28).

With hindsight there is much that can be criticized about this sampling process. Only a little extra effort, but first and foremost better planning and more time, would have been required to test a small but more representative sample of classes. Nor would this have precluded specifically contacting schools with CLIL classes as a separate sample. Instead, time pressure and the need to ensure co-operation lead me to making compromises. Since the schools contacted had good reputations they could be expected to have at least somewhat better than average students. This bias was exacerbated by my decision to exclude Supplementary Course classes for ethical reasons. My experience grading the English Foundation Course examinations indicates that these students systematically score below those from General Studies classes. In sum, the selection of schools and the exclusion of Supplementary Course classes mean that this convenience sample of upper secondary students is probably skewed positively in favor of better than average students, and that their test results might well be better than would those from a representative sample.

### 4.6.3. College and university level samples: Selection factors and constraints

In this study I included students in higher education as well as from the upper secondary level since less than half of the students who qualify for higher education actually go on to college or university. This selection process means that testing only upper secondary students might not give an accurate picture of possible Academic English reading problems in higher education. If, for instance, fewer of the weaker students go on to higher education, and if poor English proficiency follows overall

grade levels, this might lead to few, if any weak readers being found among college and university students. This would render low test-scores from a survey of the Academic English reading proficiency of upper secondary students more or less irrelevant. However, if tests of a significant number of students in higher education reveal that many, despite possible selection factors, still have Academic English reading problems, this should be a clear indication of problems with upper secondary EFL instruction.

Again, the optimum approach for examining the Academic English reading proficiency of Norwegian students would have been to test a representative sample of students using a reading test, for instance the IELTS Academic Reading Module. Unfortunately, getting an acceptable percentage of respondents from a representative sample to show up for a time consuming test would have required a massive effort beyond the scope of this study. This would not only mean finding or developing a suitable test, it would above all involve finding a means of ensuring the participation of a representative sample of students. The latter would have required generous payment of a lot of people for the time and effort expended.

For this study I therefore decided to leave this to the future and opted for an alternative approach. Instead of using the IELTS test for all university and college level respondents, I used short questionnaires with self-assessment items to measure reading proficiency (see Appendices 1, 2, and 3). This was supplemented by testing a small number with the IELTS test to validate the self-assessment items (see section 5.4).

The use of short questionnaires proved viable with regard to getting students to answer and return the questionnaires. As mentioned above, the use of self-assessment items introduced the requirement that respondents had to have experience reading English tests on their current reading lists for their answers to be valid. Another complicating factor was extensive variation from institution to institution as well as between different subjects and levels with regard to the use of English texts (Dahl, 1998; Hatlevik & Norgård, 2001). This precluded the random selection of groups of students and meant checking the reading lists for each group to ensure that the respondents' reading lists included English tests. Surveying a larger sample and excluding respondents without English texts on their reading lists was impractical given the limited time and resources, not to mention the risk of low return rates.

For the main, university level survey (see section 5.3) I therefore selected courses using English texts and textbooks from three different faculties at the University of Oslo: the Faculties of Education, Social Sciences, and of Natural Sciences. At each faculty I attempted to survey students in beginner and advanced courses, in the same subject if possible.

The process of asking department directors for permission to carry out a survey, checking that the student groups in question had English texts on their reading lists, contacting lecturers for permission to hand out the questionnaires during lectures and collecting them afterwards, proved both time consuming and cumbersome – despite the goodwill of all parties. Additional surveys of alternative groups or follow-up surveys the following semester were also necessary when fewer students than expected showed up for lectures. At the Faculty of Natural Sciences, however, the option of having students fill in forms during compulsory laboratory sessions also meant a higher return rate than expected from this faculty.

Requiring that respondents have actual experience reading English texts also influenced the selection of possible respondents in the small-scale test where I used the IELTS Academic Reading Module to validate the self-assessment items (see section 5.4). Largely because it could build upon a needs analysis of English proficiency I carried out for the Faculty of Informatics and Automatization at Østfold University College in Halden, I chose to contact students from this and the neighboring Faculty of Foreign Languages and Social Sciences who also used English textbooks. Unfortunately, the difficulties encountered in getting sufficient respondents to take the tests not only confirmed the futility of attempting large scale testing with limited resources available, it also forced me to ask for help from acquaintances at the Norwegian University of Science and Technology (NTNU), Trondheim and at the University of Bergen. It also became clear that the use of volunteers skewed the sample in favor of the more proficient respondents who felt "comfortable" enough about their English proficiency to volunteer for the test.

All in all, limited time and resources, the constraints imposed by the use of self-assessment items, and in the case of the validation test (see section 5.4), and difficulties in getting volunteers for the test, meant that I ended up with what might best be termed convenience samples, but with an element of purposive sampling (see section 5.3). As with the upper secondary sample there is also reason to suspect that these samples are somewhat skewed in favor of more capable students. This was quite

marked with the validation test students (see section 5.4). For the samples surveyed in sections 5.2 and 5.3, the high proportion of students from the Faculty of Natural Science in Oslo, and the general preponderance of experienced students give reason to believe that these samples might be somewhat skewed in favor of above-average students, with fewer English reading problems indicated than would be the case with a more representative sample.

Details about the samples for both upper secondary and university and college levels are displayed in Table 4.1. Further details about each sample are included in sections 5.2 to 5.6.

### 4.6.4. External validity

Shadish, Cook & Campbell (2002) define external validity as "inferences about the extent to which a causal relationship holds over variations in persons, settings, treatments, and outcomes" (p. 83). For this study this can be interpreted as the extent to which the test scores and covariations found are generalizable to the reference population. As mentioned above these would, on the one hand be Norwegian upper secondary level students in branches qualifying for higher education, and students in higher education on the other.

As mentioned, practical constraints and decisions made in the course of this study resulted in convenience instead of representative samples. The three samples from the university level, for instance, are drawn from selected studies and institutions. Likewise, the upper secondary level sample comprises classes from a limited number of better-than-average schools. All in all the selection factors at both upper secondary and the university and college level most probably resulted in samples skewed in favor of better than average students. This means that generalizing the test results to the reference populations would at the minimum give a too optimistic estimate of their Academic English reading proficiency. Furthermore, as shown in section 6.1, the findings and trends are internally consistent. Thus, while the findings of this study are not generalizable to the reference populations, I would argue that these results provide reasonably useful estimates of the levels of Academic English reading proficiency among Norwegian students and of the covariations between reading proficiency and key independent variables.

Of course, any firm generalizations in this regard will require surveys of large and representative samples from the reference populations, samples comprising respondents from the upper secondary level as well as the university level. This should be supplemented with experiments designed to test central causal relations, such as the effect – or the lack of effect of completing the Advanced English Course on reading proficiency, of CLIL instruction, and the effect of extensive reading. If practical, tracking studies following beginner students in higher education over a period of time would also be of interest. I will return to this in more detail in Chapter 7, section 7.2 below.

## *4.7. Method and statistical conclusion validity*

### 4.7.1. Method

The questionnaires and tests used in this study can be found in Appendices 1 to 4.[36] In compliance with regulations all were submitted to and approved by the Norwegian Social Science Data Services.

The first version of the questionnaire (see Appendix 1) was developed and tested with 66 student respondents at the University of Oslo, and Østfold University College, Norway, in the spring of 2000. New findings and obvious shortcomings lead to major revisions to improve the self-assessment items used as indicators of English reading proficiency as well as of the indicators for other background variables. The results and considerations behind these revisions are presented in more detail in section 5.2.

The revised questionnaire (see Appendix 2) comprises 74 items that can be grouped into three categories: indicators of the dependent variables English and Norwegian reading proficiency, of independent variables expected to affect reading comprehension, and of independent variables providing information about student background and EFL instruction. This questionnaire was used for the survey of university and college level students presented in section 5.3 and together with the

[36] All questionnaires and instructions were given in Norwegian, with the exception of the IELTS Academic Reading Module. They were translated to English for inclusion as Appendices 1, 2, and 3.

IELTS Academic Reading Module (see Appendix 4) for the survey presented in section 5.4.

Minor changes were subsequently made to adapt the questionnaire to upper secondary level students (see sections 5.5, 5.6, and Appendix 3) where they were used together with the IELTS Academic Reading Module (Appendix 4).

To allow for statistical processing and ensure that the questionnaires could be filled in quickly all items were either closed, multiple-choice questions or seven point Likert scales. Findings were processed using the statistical processing program Statistical Package for the Social Sciences (SPSS), versions 10 and 11 for the Macintosh. Not all of the items have been analyzed in this study, either because it became apparent they were poorly operationalized, such as the indicators of reading strategy use (see items 46 to 50 in Appendix 2), or because they proved to be of no or only limited relevance for this study.

### 4.7.2. Procedure

As mentioned, the questionnaires in the surveys presented in sections 5.2 and 5.3 were handed out and filled in during lectures or laboratory exercises and collected immediately afterwards. With the survey presented in section 5.4, which included the IELTS Academic Reading Module, respondents were asked to show up in a designated room after lectures. They had 90 minutes to complete the test and were paid NOK 100,- for their effort. The low-stakes testing situation meant that seven (13%) respondents from NTNU, Trondheim, were allowed to complete the questionnaire and test at home. They were requested to use only 90 minutes and to avoid using dictionaries or asking others for help. There is, unfortunately, no certainty that they complied with this request, which might well mean that the scores for these eight respondents are higher than they would have been under controlled conditions.

At the upper secondary level there was no such problem. The respondents all used two lessons, about 90 minutes, to fill in the test with either myself or a teacher present (sections 5.5 and 5.6).

The item format used in the questionnaires and the IELTS test meant there was little risk of rating errors. Apart for the data in the survey in section 5.3, which my 17-year-old daughter and a friend, under close supervision, helped out with, I processed all other questionnaires and the IELTS test myself. The latter were

corrected according to the IELTS instructions, except for one item in which IELTS specified the use of the preposition *on* in the expression "wind on the film" for a correct answer. I also accepted "wind the film", despite the missing preposition, as an acceptable answer. Correct answers were entered in SPSS as 1 when correctly answered, as 2 when incorrectly answered, and 9 when unanswered.

Only a very small number of questionnaires from university and college level students were rejected. This was usually because they had not filled in two or more pages of the questionnaire. At the upper secondary level about 10 questionnaires where the respondents had not even started on the IELTS test were rejected. Unfortunately, there are missing answers in many of the completed questionnaires. This will mean that the number of respondents (N) will vary somewhat from statistical calculation to statistical calculation.

### 4.7.3. Statistical processing

As noted above, the findings in this study were processed using the statistical processing program Statistical Package for the Social Sciences (SPSS), versions 10 and 11 for the Macintosh (http://www.spss.com). The SPSS is a sophisticated statistical analysis program developed primarily for use in the Social Sciences or for business purposes. In the present study, however, I use only the most basic functions in this program. I also use the Microsoft Excel spreadsheet program to display data from SPSS graphically. For those who are not familiar with statistical analysis I will give a brief, non-mathematical introduction below. For ease of presentation I will use statistical processing in SPSS as a point of departure for the following brief and, as said, non-mathematical presentation.

**Variables**

Data can be entered into the SPSS program as either nominal or ordinal values. Nominal values classify respondents in categories such as gender, first language, or with regard to completed courses. With these SPSS simply tallies the numbers of males and females, or the distribution of respondents between different upper secondary level EFL courses. To give an example, data can also be entered as ordinal data, for instance with values ranked in logical order in intervals from one (very difficult) to seven (very easy). The Likert scales used in this study are a typical

example of items providing ordinal data. They are also known as interval scales, depending upon whether there are equal differences in the numbers assigned to the categories.

A variable is a characteristic that can have different values for the individuals in the sample. To use reading proficiency as an example, in this study self-assessment or IELTS test scores are indicators of this variable. In statistical calculations, we distinguish between dependent and independent variables. Reading proficiency is a dependent variable in this study, while upper secondary EFL courses and the amount of English books read are independent variables, the first nominal, the second ordinal. Variables based on nominal data are also known as qualitative variables, while those based on ordinal data are called quantitative variables.

Sometimes nominal categories are placed on a scale, (see for instance item 23 in Appendix 2) in which for example upper secondary EFL courses are given the values 1 for the first year English Foundation Course, 2 for the second year courses, and 3 for the third year, Advanced English Course. This makes it easy to see the distribution of these courses among the respondents because SPSS allows us to group respondents according to these categories. In turn, these can, for example, be used to compare respondents with the Foundation and those with the Advanced English Course and see if one group reads more than the others. However, for calculations of for instance bivariate correlations (r) to see how English course selection correlates against IELTS scores, the values on this scale value are nominal categories and cannot be used for this purpose. Instead, SPSS allows one to construct a dummy variable by assigning the value 1 to the Advanced English Course and 0 to the others. This gives a bivariate scale, but with limited range.

**Samples and distribution**

In statistical analysis one distinguishes between populations and reference populations. In this study I use as reference populations subsets of the total population selected according to certain criteria. For surveys of political preference this criterion could be voting age. In this study the main subset – or reference population – is Norwegian students in higher education. The second was upper secondary level students in the process of qualifying for higher education.

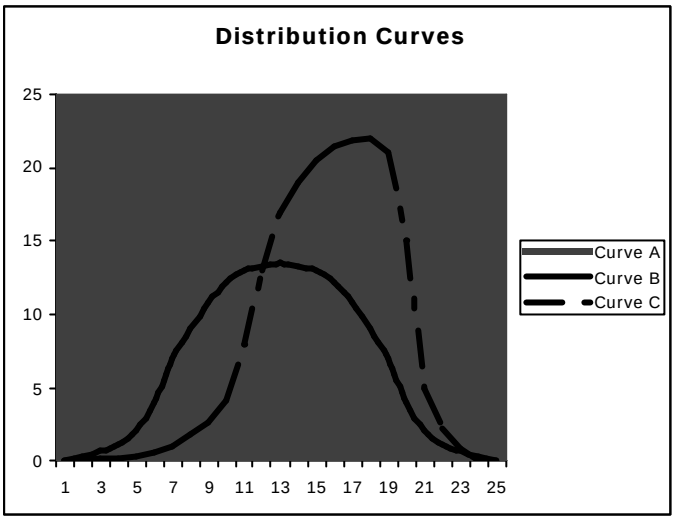
In political polls, for example, attempts are made to select a representative sample from the reference population, either so that all respondents have the same

chance of being selected, or that the probability of being selected is known. Given a sufficiently large sample, from which a sufficiently large percentage, usually 60% or more participate, this allows generalizing from this sample to the general population within a given margin of error. This Standard Error (standard error of the mean) can be calculated for the sample in question (see Hinkle, Wiersma, & Jurs, 1998, pp. 172-176). As mentioned above, it was not possible to select representative samples from the reference populations in this study, which means that the results from these five samples are not generalizable to the reference populations. I have therefore not calculated the Standard Error for any of these samples.

**Distribution**

With large sets of data, scores can be displayed as a frequency distribution, "a tabulation that indicates the number of times a given score or group of scores occurs (Hinkle, Wiersma, & Jurs, 1998, p. 27). These can be displayed in tables, or as graphs.

The data in many of the "variables in the physical and behavioral sciences are normally distributed (Hinkle, Wiersma, & Jurs, 1998, p. 89). In what is known as the standard normal distribution data are distributed on a symmetric bell-shaped curve with most of the values at the middle of the scale, where the median value, which divides the sample into halves, equals the average score, the mean ($\overline{X}$). To use the scores from the seven point Likert scales, this means that 50% of the scores will be lower than the median value of 3.5, 50% higher, and that scores are distributed symmetrically around the mean. The slope of the curve depends upon the variance in the scores, to what extent the scores are dispersed in the sample. The most common measure of this variance from the mean is the standard deviation (SD), the square root of this variance. Thus, the standard deviation in the sample determines the slope of the curve in the normal distribution. As can be seen in the example figure below, Curve A indicates that there is less variance – or a lower standard deviation than in Curve B. While Curves A and B have the same means, this is not the case in Curve C where the distribution is skewed to the right, and where the mean and median values differ.

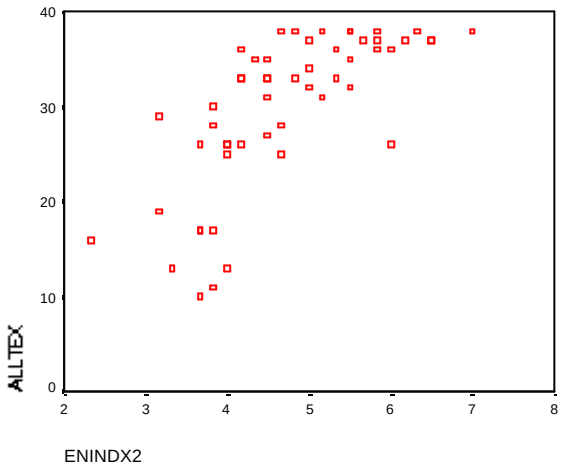



Example of three distribution curves.

In SPSS such frequency distributions, with median and mean values, and the standard deviations are easy to calculate. Actual scores may be presented in a histogram, and/or calculated as a distribution curve. In the largely descriptive statistical analysis of this study, the mean value of for instance the IELTS scores for reading is useful for comparing groups, while the standard deviation indicates the spread in the scores within these groups. In such studies the distribution of the scores may be skewed as in Curve C in the Figure above, that is to say clustered to the right or left, and the curve, if calculated, will not be symmetrical. Another example is Figure 5.6 in section 5.4, where the IELTS scores are skewed to the right with a mean of about 30 of 38 possible. This is because the majority of the volunteer respondents achieved high scores.

**Bivariate correlations**

In this study testing for bivariate correlations (r) is frequently used. With quantitative variables this consists of calculating whether the two variables covary. To give an example, the self-assessment scores for reading in English could in the present study be expected to covary positively with the dependent variable for reading proficiency such as IELTS scores. In practice, this means that the more the respondents have read, the higher they score in the IELTS test. Such covariation can be illustrated graphically in a scatter-plot.




Example of a scatter-plot graph. Copied from section 5.4, Figure 5.7

Despite a certain ceiling effect where many respondents achieve maximum scores, the self-assessment and IELTS scores covary in this sample. In other words, a respondent with a high self-assessment score as a rule also has a high IELTS score. Here the distribution reflects a fairly high correlation, r= .72. The degree of covariation – or the correlation coefficient – can vary between -1, a perfect negative correlation, and + 1, a perfect positive correlation.

This scatter-plot reflects one of the highest correlations found in this study, the r = .72 between the self-assessment scores of reading proficiency and IELTS scores (r stands for the Pearson correlation coefficient used in this study). If this correlation is squared, the square root of 0.72 (since $0.72^2 \sim 0.5$) indicates that about 50% of the variance in one variable is shared with the other, but with the direction being uncertain. This is also called explained variance. A correlation, however, does not imply causation. It may, but this will have to be ascertained by other means such as experiments or by resorting to theory. Furthermore, a correlation might be spurious. For instance, it might be possible to find a correlation between the shoe sizes of university level respondents and Academic English reading proficiency. This could either be coincidental, or perhaps due to female respondents having smaller shoe sizes than males. To the extent reading proficiency varies with gender this might explain such a correlation. Whether such a correlation is spurious or not is often best resolved in the light of relevant theory.

**Multiple regression analysis**

In the Social Sciences it is rare to find that only one independent variable correlates with a dependent variable. For instance, in section 5.6, the scores for student reading of English books, magazines, and on the Internet all correlate with IELTS scores. However, the scores for these items also correlate with each other. This is because part of this correlation is due to shared variance, and part being unique to the variable in question. If respondents only read English on the Internet, or only read books, or only magazines, there would be no shared variance – each correlation would be unique to the variable in question. However, many respondents will tend to do all three, which makes distinguishing between the contribution that is unique to the variable and what is shared necessary. In multiple regression analysis this shared variance is corrected for, and we get the multiple correlation coefficient ($R^2$). $R^2$ is the explained variance for the unique contributions from each of the variables. The correlation for each separate variable when the correlation between variables is corrected for is the beta coefficient (ß).

Multiple regression analysis is easy in SPSS. However, the correlations between the different variables mean that results are determined by which variables, and in which order they are included in a *regression model*. Therefore, without a theoretically sound and explicit model this makes interpreting the ß for the different variables a difficult and risky task. Lacking such a model, I have therefore limited my use of multiple regression analysis to calculate the explained variance ($R^2$) for groups of relevant variables.

**Additive indices and variables**

As noted above, a number of self-assessment items were used as indicators of different aspects of the same variable, here academic English (and Norwegian) reading proficiency. To simplify calculations it is possible in SPSS to merge these into a single variable, an additive index. This also helps reduce the effects of possible measurement errors and improves both validity and reliability (Hellevik, 1999, pp. 303-310). As mentioned above, the reliability of such an index can be tested using the Cronbach-Alpha test. The resulting reliability coefficient α expresses how precisely and consistently a set of items – operationalized through comparable items – measure

the same underlying trait. To be more exact, α expresses how consistently the items measure the same underlying trait (Crocker & Algina, 1986, pp. 119-121). A sufficiently high alpha-coefficient may be the result of low correlations between many items, such as with the IELTS test used in this study. It might also be due to higher correlations between fewer items, such as the six items used in the self-assessment indices of English and Norwegian reading proficiency in sections 5.2, 5.3, and 5.4. As noted above, however, a high α is no guarantee that the trait measured by the items and index is what they are designed to measure, such as academic English reading proficiency. This is a question of construct validity (see section 4.4).

**Statistical significance**

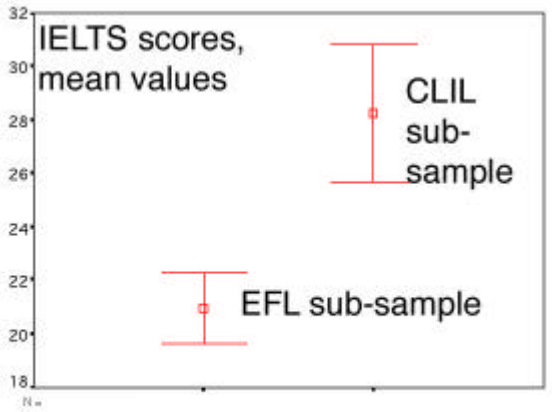
The last issue in this brief presentation is the question of statistical significance. Put simply, this concerns the probability of a given statistic, a bivariate correlation, for instance, being due to the chance selection of respondents or the result of an actual, underlying trend. The question to ask is how likely it is that one would get the same result in a new sample, or over several new samples. Presupposing a representative sample from the population in question, this probability can be calculated on the basis of the distribution of the scores in question and the number of respondents (N). SPSS does this automatically. It is common to indicate significance levels as either $p>.05$, or $p>.01$, that is to say the probability of getting the same results with a new sample are 95% or 99%. Alternatively, that there is less than a 5% or 1% chance of the results being due to random selection of respondents. In most studies, the 95% level, $p>.05$, is considered satisfactory.

In this study, samples are not representative, which of course detracts somewhat from the value of the levels of significance. They can, perhaps, best be described as levels of probable significance if they had been calculated from a randomly selected sample. Nevertheless, these calculations are robust enough to give a useful indication whether findings are due to chance or not, and have therefore been included.

It is important to keep in mind that although a statistic, such as a correlation, is significant, this does not necessarily mean it is interesting. With sufficiently large samples most correlations will be significant. However, the correlation might be so low as to be meaningless.

**Confidence intervals**

In section 5.6 I compare the IELTS scores of upper secondary students who have had CLIL instruction with those who only had ordinary EFL instruction. In SPSS this can be done graphically, see for instance the following example figure copied from section 5.6, Figure 5.14 below.




Example of a confidence intervals figure. See section 5.6, Figure 5.14 below.

In this figure, the degree of overlap indicates whether the difference in the IELTS scores between the two groups is statistically significant or not, at either the 95 or 99% levels of certainty. The less the groups overlap, the greater the chance of the difference in the scores between the groups being statistically significant.

### 4.7.4. Statistical conclusion validity

The presentation of the statistics used in this descriptive study has been short and non-mathematical. I have attempted to briefly explain the statistical reasoning and processes underlying the calculations that SPSS does more or less automatically. Additional detail can be found in many books on statistics and research methods.[37] In the following I briefly examine key threats to the validity of statistical conclusions.

[37] Some examples are *Forskningsmetode i sosiologi og statsvitenskap* by Ottar Hellevik, *Applied Statistics for the Behavioral Sciences* by Hinkle, Wiersma & Jurs, and *Å forklare sosiale fenomener* by Ole Skog, the latter focusing on multiple regression analysis.

According to Shadish, Cook & Campbell (2002), statistical conclusion validity:

> concerns two related statistical inferences that affect the covariation component of causal inferences: (1) whether the presumed cause and effect covary, and (2) how strongly they covary. For the first of these inferences we can incorrectly conclude that cause and effect covary when they do not (a Type I error), or incorrectly conclude that they do not covary when they do (a Type 2 error) (p. 42).

In the following the discussion is limited to the covariation between variables, without any inferences about causal relations being made. Furthermore, it does not concern the most important data in this study, the scores for reading proficiency, which are discussed above under the rubric of construct validity. It applies to the reported covariations between the dependent variables, between these and the independent variables, and between independent variables.

In this study I consider the main threats to statistical conclusion validity to be those of low statistical power, unreliability of measures, and restriction of range.

Statistical power "refers to the ability of a test to detect relationships that exist in the population, and is conventionally defined as the probability that a statistical test will reject the null hypothesis when it is false" (Shadish, Cook, & Campbell, 2002, p. 45). This will vary according to the number of respondents and the strength of the interactions. In this study I report findings as statistically significant when the probability of making a Type 1 error is $p<.05$ or better. In some cases, in section 5.2 in particular, interesting relations are also reported if the level of significance is below this level.

### 4.7.5. Summary: Reliability and validity

In sum, the reliability and overall validity of this descriptive study of Norwegian students' academic English reading proficiency depend upon:

- the construct validity of the tests used to measure reading proficiency,
- to what extent samples tested and surveyed are generalizable to the reference population,

- the validity of the statistical conclusions.

**Reliability**

To start with reliability, I would claim that the use of questionnaires with items based upon predetermined categories and Likert scales, and an IELTS test with clear correcting criteria, have contributed to minimizing random error. In addition, all of the IELTS tests have been corrected by the same rater. Attempts have also been made through statistical testing, and re-examining the items and their operationalization in the light of relevant theory, to keep systematic error to a minimum.

**Construct validity**

Systematic error concerns the scores from the two tests used to measure Academic English reading proficiency as well, but has been discussed under the rubric of construct validity. With the IELTS test, I claimed that detailed examination of this issue was superfluous since this was an internationally recognized and well-researched test for which convincing documentation is available. I also argued that one source of test-invalidity, that the low scores from the main sample of upper secondary respondents is due to test-unfamiliarity, can be discounted. As mentioned above, this is because this has not been a problem with other international surveys, and because this does not appear to be a problem for CLIL course respondents in the same sample in section 5.6, nor for the university level respondents in section 5.4.

Concerning the construct validity of the self-assessment used to measure Academic English reading proficiency, both the high correlation (r=.72) with IELTS scores, research on self-assessment in general, as well as examination using Messick's criteria for construct validity, argue in favor of the validity of the scores from the self-assessment items. As mentioned, this is limited to respondents with actual experience reading English tests and textbooks in the context of Norwegian higher education.

**Samples**

Sampling at the university and college level was, as noted above, constrained by three factors. One was the difficulty of getting university level respondents to take time consuming reading tests. Self-assessment items in short questionnaires were therefore used instead. While this made it possible to survey college and university students in connection with lectures and laboratory exercises, the disadvantage was that this

limited the sample to students with English texts on their reading lists. Each group had to be checked in this regard, and this precluded surveying a more randomly selected sample. Limited time and resources introduced additional constraints to the numbers sampled. Furthermore, closer examination gave reason to believe that the sample surveyed included an inordinate number of experienced students, and a large proportion of these were from the Faculty of Natural Sciences. This meant that this group as a whole comprised more "select" respondents, perhaps introducing a bias in favor of better than average students.

At the upper secondary level, it was first and foremost time and resources that limited my efforts to ten upper secondary schools. The seven schools that participated comprised some particularly well-reputed schools, suggesting that students could be expected to be better qualified than average. This selection bias was further exacerbated by my decision not to test students from the Supplementary Courses. All in all, I believe these selection factors introduced a bias in favor of better than average students.

**Validity**

A somewhat biased sample, however, does not necessarily mean that the covariations found in this study are invalid, in particular since they were reasonably consistent over several samples. What it does mean is that their strength might differ from those of a representative sample, although there are grounds to claim that they would be found there as well.

In the last instance, I would contend, however, that this bias actually strengthens the two main conclusions of this study. The first of these is that a disquieting number of students at the upper secondary level from seven schools show inadequate levels of academic English reading proficiency. The second is that, despite possible selection factors, this is a problem for fairly large numbers of students in higher education as well. This will provide compelling arguments for a large-scale follow-up survey supplemented with smaller scale experiments with pre and post-testing and/or with control groups to identify causal relations.

# 5. RESULTS

## *5.1. INTRODUCING THE SURVEYS*

This chapter presents the findings from the five surveys that comprise this study. They provide information on whether, and to what extent, Norwegian students master the reading of English textbooks in higher education and on key variables that covary with academic English reading proficiency, such as upper secondary English courses, reading habits, and vocabulary.

In this introduction to Chapter 5 I will start by expanding on subsections 4.6.2 and 4.6.3 by providing additional information on the considerations affecting the design of this study. Next I will give an overview of the structure and contents of this chapter, ending with a list of the symbols and abbreviations used.

### 5.1.1. Research design - continued

As described in Chapter 4, subsections 4.6.2 and 4.6.3, three of the five surveys in this study (see sections 5.2, 5.3, 5.4) comprise respondents from the university and university college level, and two (see sections 5.5, 5.6) respondents from the upper secondary school level, General Studies branch. Two of the five are pilot surveys. An overview is provided in Table 5.1 below.

Table 5.1. Overview of the five surveys according to type, level of education, number of respondents, and means used to measure reading proficiency.

| Sections | Type | Respondents, level | Respondents, number | Means used to measure reading proficiency | |
|---|---|---|---|---|---|
| 5.2 | Pilot survey | University level | 66 | Self assessment | |
| 5.3 | Main university level survey | University level | 578 | Self assessment | |
| 5.4 | Validation test | University level | 53 | Self assessment | IELTS |
| 5.5 | Pilot survey | Upper-secondary | 21 | | IELTS |
| 5.6 | Main upper secondary level survey | Upper-secondary | 217 | | IELTS |

In Section 4.3 I outlined the key methodological and practical considerations that lie behind the composition of the samples and my choice of means of assessing reading proficiency. To recapitulate briefly, for the surveys presented in 5.2 and 5.3 I found it necessary to use short questionnaires with self-assessment items to measure reading proficiency. The validity of the self-assessment items required that only respondents with actual experience reading English texts could be selected. For the survey presented in section 5.3, this constraint, as well as limited resources, precluded surveying a representative sample of students. Likewise, when I in the survey presented in section 5.4 used the IELTS Academic Reading Module to validate the self-assessment modules, only students with English texts on their reading lists could participate. This limitation, combined with the difficulties involved in getting students to volunteer for the test, resulted in fewer respondents than desired in this particular survey. At the upper secondary level, however, it proved less difficult to gain access to respondents. The IELTS Academic Reading Module could therefore be used to assess reading proficiency for all. Therefore, it was first and foremost time and resources that limited the number of respondents at this level and precluded a randomly selected, representative sample.

Two other factors also impacted on research design and sampling of the present study. One was its exploratory nature. The second was the element of learning by doing. An example of the latter is my choice of samples. At the outset I had three main options with regard to sampling. The first was to focus on the university level exclusively. The second option was to survey upper secondary level respondents only. The third was to include both levels, as I have done in the present study. The need for the third option, however, first became apparent while underway.

In the beginning I decided to start with university and university-college level respondents, reported on in sections 5.2 and 5.3. This was because it was imperative to ascertain whether a significant number of students at the university level actually had problems reading English texts. This is, after all, the main goal of the present study. I also hoped that these two surveys, when supplemented with the test data of a third group of university and college level respondents in the study reported in section 5.4, would provide sufficient data for the study. The rather low numbers of respondents who volunteered in the study reported in section 5.4, in addition to the somewhat disproportionate number of respondents from the Faculty of Natural Sciences in the study reported in section 5.3, made clear the need for additional samples. At the same time the issue of student attrition came rather belatedly to my attention, in particular the beginner students who quit during the first semester. This meant that the university and college level samples in this study could well be highly selected and the results biased in favor of the more capable students. I therefore considered the opportunity to compare the reading proficiency scores of upper secondary with university level respondents a means of gaining insight into possible selection factors.

The attrition issue notwithstanding, the main impetus behind my decision to include respondents from the upper secondary level was a purely practical one. After the difficulties encountered in the study reported on in section 5.4 finding university and college level volunteers for the IELTS test, I hoped it would be easier to get upper secondary level students to take part. This also proved to be the case. The end result of these decisions was a study comprising five samples, three with university and college level respondents and two with upper secondary level students.

In sum, the decisions made on research design and sampling while this study was underway resulted in five convenience samples. These provide information on a

cross section of Norwegian students, ranging from the upper secondary level to beginner and advanced students in higher education.

### 5.1.2. Overview of the sections

The surveys that comprise this study are presented and analyzed separately, in sections 5.2 to 5.6 below. I start each section with a brief introduction to the particular survey and presentation of methods and samples to supplement the information provided in section 4.6. This is followed by the results: first the scores for the dependent variables for reading proficiency, and then a statistical analysis. The results from the different surveys are summarized and compared in section 6.1 below, followed by the discussion of the results in section 6.3. I am aware that this mode of presentation risks being repetitive. Nevertheless, I consider the five parallel surveys to be so different with regard to samples, questionnaires, and the tests used that they are best presented separately. The findings can then be summed up and analyzed in a separate section.

Section 5.2 presents the first pilot survey comprising 66 respondents from the University of Oslo and Østfold University College in Halden. The respondents are Biology and Political Science students who have a considerable number of English textbooks on their reading lists. It uses self-assessment items to measure English reading proficiency. The English version of the questionnaire used is included as Appendix 1.

The second survey in this study, presented in section 5.3, builds upon the pilot. It uses a revised questionnaire to survey 578 beginner and advanced level students from three faculties of the University of Oslo (see Appendix 2). As in the pilot survey, the respondents were students of a non-language subject using English textbooks, and self-assessment items were used to measure English reading proficiency.

The third survey, presented in section 5.4, combines the questionnaire used above (Appendix 2) with an IELTS Academic Reading Module test (Appendix 4). It comprises 53 respondents from Østfold University College, the University of Bergen, and the Norwegian University of Science and Technology in Trondheim. The university level respondents were volunteers paid to participate in the test. Its main goal was to validate self-assessment scores of reading proficiency with test scores on the IELTS Academic Reading Module.

The fourth survey, presented in section 5.5, is a pilot survey comprising 21 upper secondary school level respondents. It uses an adapted version of the questionnaire used in the studies reported in sections 5.2 and 5.3 (Appendix 3), and the IELTS Academic Reading Module (Appendix 4). Apart from troubleshooting the revised questionnaire, the main goal was to see whether the IELTS test would function with upper secondary level students.

The fifth and last survey, presented in section 5.6, is of 217 senior upper secondary school students from seven upper secondary schools in different parts of Norway. It uses the questionnaire tested in section 5.5 (Appendix 3) in combination with the IELTS Academic Reading Module test (Appendix 4). It functions as an independent test of whether upper secondary school EFL instruction develops the levels of English reading proficiency needed for higher education. It also offers the opportunity to examine findings from upper secondary level respondents with those from the university and college levels, and track how reading proficiency and key independent variables vary across levels of study.

Last I compare the results across the different surveys and levels in a summative analysis in Chapter 6, Section 6.1.

### 5.1.3. Symbols used

Below the following abbreviations are used when presenting data:

$\overline{X}$ = mean

SD = standard deviation

SE = standard error

r = correlation coefficient

$R^2$ = multiple correlation coefficient (explained variance)

$\alpha$ = reliability coefficient (Cronbach-Alpha)

p = statistical significance

$\beta$ = beta coefficient

N = number of respondents

As has been mentioned, N will vary according to whether all or part of the sample is included in the calculations, and whether there are missing answers in the questionnaires.

## *5.2. STUDENT READING OF ENGLISH TEXTBOOKS: A PILOT STUDY AT THE UNIVERSITY LEVEL*

### 5.2.1. Introduction

This pilot survey took place in April 2000. It had two main goals. The first was to "troubleshoot" the questionnaire developed for this study, that is to say, see whether the respondents understood the items and whether they provided useful information (Appendix 1). The second goal was exploratory, to see whether, and to what extent any of the respondents actually had difficulties reading the English texts and textbooks on their reading lists. Furthermore, it was also important to provide an initial picture of the degree and nature of possible problems and identify the main variables covarying with reading proficiency.

### 5.2.2. Sample and method

**Sample**

As mentioned above, the 66 respondents in this sample comprised 14 students from the Political Science Foundation Course (60 ECTS credits) at the Faculty of Business, Foreign Languages, and Social Sciences at Østfold University College in Halden. The remaining 52 were from the Faculty of Mathematics and Natural Sciences, Department of Microbiology at the University of Oslo. Of these, 25 were students in the introductory 15 ECTS credits B-100 (Biology) course, and 27 were from a more advanced 30 ECTS credits B-200 (Microbiology) course.

The majority of the respondents were from counties adjacent to Oslo and thus to the University of Oslo. Nine respondents had completed upper secondary school abroad, ranging geographically from Sweden to Ethiopia. Ten stated that Norwegian was not their first language, but were not excluded from the sample due to the low number of respondents. Their language backgrounds ranged from Amharic or Chinese to French, Portuguese and Swedish. None had English as their L1, although one had completed upper secondary school in the USA. Most turned out to be fairly experienced students, 12 (18%) had studied for at least a year, while 30 (45%) had completed the equivalent of two years of full time study or more.

Analysis of upper secondary level subject choice revealed that 36 (54%) of the respondents had completed the Advanced Mathematics Course, compared to 14 (21%) who had completed the Advanced English Course. This reflects the preponderance of respondents from the Faculty of Mathematics and Natural Sciences.

**Method**

The questionnaire used (see the English translation in Appendix 1) was in Norwegian, and the 64 items fall into three main categories: First there are the indicators of the dependent variables: reading comprehension in English and Norwegian. The second category comprises indicators of independent variables expected to covary with reading comprehension, such as upper secondary EFL instruction and reading habits. Finally, the third category provides background information on independent variables ranging from mother tongue and gender to the geographical area where students had completed upper secondary school.

As mentioned in section 4.3, in order to ensure access to respondents and a high rate of return, the questionnaire was designed to be filled in quickly, for instance during lectures or laboratory sessions. This meant using closed, multiple-choice items and Likert scales, and self-assessment items instead of tests as indicators of reading proficiency (see 4.3.2). Many of the 64 items turned out to be unsuitable for statistical processing or eliciting information because of poor design. Analysis has therefore been limited to the most important of the available variables. Results are presented as numbers, percentages or as bivariate correlations. Again, as discussed in section 4.7, a non-representative sample means that the values for statistical significance (p) should be interpreted with caution.

During the statistical processing of this pilot survey it immediately became clear that the questionnaire needed revising, in particular the items used to construct additive indices used as indicators of reading. The main oversight turned out to be the lack of self-assessment items for reading in Norwegian needed for comparison with English. This meant that two additive indices for English had to be constructed. For Norwegian the three available items (items 2.3, 2.4, and 3.6) [38] were combined into *Norindex*, while for English the comparable items (items 2.5, 2.6, and 3.7) were used for *Enindex1.* According to the Cronbach-Alpha test the reliability of these two indices, that the different items included measure the same underlying trait, is a reasonably high $\alpha$ = .76 for *Norindex* (N=61) and a comparable $\alpha$= .76 for *Enindex1* (N=66).

For reading in English the questionnaire included additional self-assessment items. One was on how difficult sentences affected reading (item 3.8), another on the importance of background knowledge for understanding (item 3.9), yet another on difficulties grasping the text as a coherent whole (item 3.10), and one on how dense presentation of information affects reading (item 3.11). Lastly, there is an item asking about reading speed in English compared to Norwegian (item 3.2), but using a five point instead of the seven point scales in all the other items. Based upon the discussion concerning the operationalization of the reading construct in subsection

[38] The first (item 2.3) asks students to indicate how difficult they find the reading of their Norwegian textbooks. The second asks about their understanding of content (2.4), and the third how unfamiliar words affect understanding (item 3.6). The comparable items for English are 2.5, 2.6, and 3.6.

4.3.2, items 2.5, 3.7, 3.8, and 3.10[39] were combined into a second and somewhat different index for English, *Enindex2*. With the exception of 3.2 on reading speed, which was not included in the index because it used a five instead of seven point Likert scale with non-comparable intervals, *Enindex2* comprises four of the five items used in the English self-assessment indices in surveys 5.3, 5.4, 5.5 and 5.6 (see Figure 4.1 above). *Enindex2* is used for all calculations that did not involve comparison with Norwegian, in which case I use *Enindex1*. The reliability coefficient for *Enindex2* with four items is a reasonably high $\alpha = .76$ (N= 66).

Again, had comparable items been available for both English and Norwegian, using two indices, one (*Enindex1*) for comparison with Norwegian and a second (*Enindex2*), for all other calculations would not have been necessary. This is avoided in the revised questionnaires (see Appendices 2 and 3).

### **5.2.3.** Results

**Reading difficulties**

I started the analysis by examining how respondents found the reading of English textbooks compared to reading in Norwegian. This was done by comparing the mean scores of the additive index for Norwegian (*Norindex*) with the one for English (*Enindex1*). As mentioned above the items in the indices are based on a seven-point scale from 1 (impossible to understand) to 7 (no difficulties). Little or no difference would indicate that reading English textbooks is not considered to be more difficult than in Norwegian.

As can be seen in Table 5.2, the difference between a mean score, $\overline{X} = 5.0$ for *Enindex1* compared to $\overline{X} = 5.6$ for *Norindex*, is by no means dramatic. Nevertheless, it indicates that students find their English textbooks more difficult. Excluding the 10 students who do not have Norwegian as their first language affects these results only marginally.

Table 5.2. Mean values for the *Norindex* and *Enindex1* indices. The scale used is from 1 (impossible to understand) to 7 (no difficulties).

[39] The first (item 2.5) asks students to indicate how difficult they find the reading of their English course material. The second asks how many words they find unfamiliar (3.7), the third how difficult sentences affect understanding (item 3.8), and the fourth on to what extend they find the texts coherent when reading (item 3.10).

| | *Norindex* | *Enindex1* | *Enindex2** |
|---|---|---|---|
| N | 61 | 66 | 66 |
| MEAN ( $\overline{X}$ ) | 5.6 | 5.0 | 5.1 |
| STANDARD DEVIATION (SD) | 1.37 | .99 | .76 |

* The indices are not entirely comparable, *Enindex1* is based on three items, *Enindex2* on four.

However, even though the difference in the mean scores is not large, the distribution is also important, in particular the number of low scores. As can be seen in Figure 5.1 below, for *Enindex1* many respondents score on or below the mean value of $\overline{X} = 5.0$.

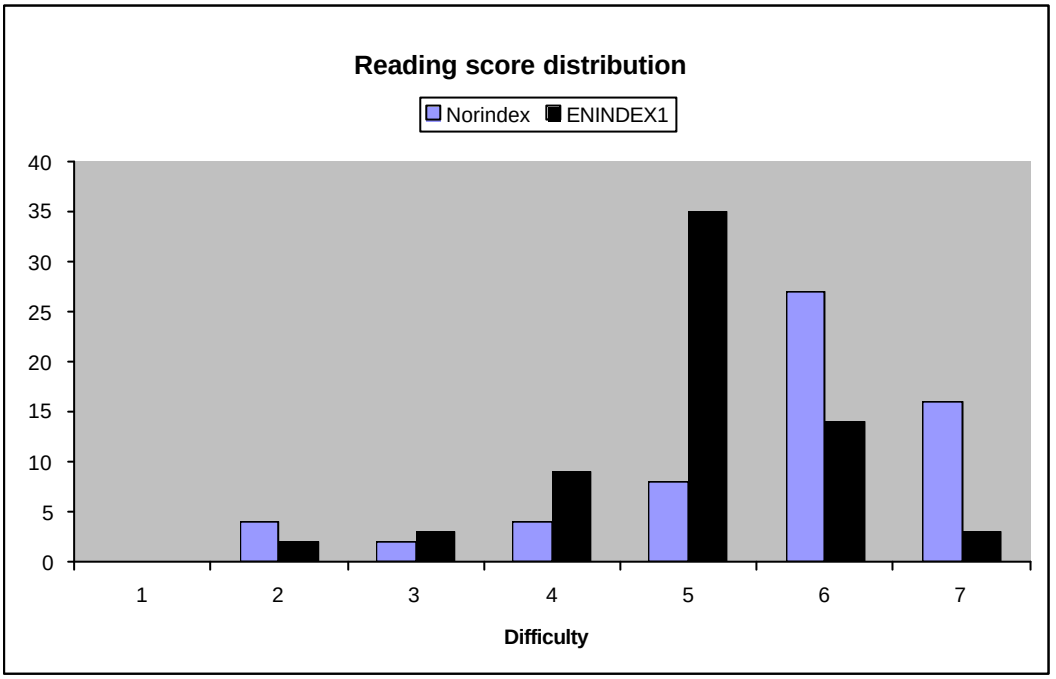



Figure 5.1 Distribution of scores for *Norindex* and *Enindex1*. The scale used is from 1 (impossible to understand) to 7 (no problem). Median values are 6.0 for *Norindex* and 5.0 for *Enindex1*. For display purposes results are recoded, values from 0 to 1.49 as 1, from 1.5 to 2.49 as 2, etc.

Another way of examining this is by looking at the differences between scores for reading in Norwegian and English, as measured by *Norindex* and *Enindex1*. This is displayed in Table 5.3 below.

Table 5.3. Difference between scores for *Norindex* and *Enindex1*. The scale used is from 1 (impossible to understand) to 7 (no problem). For display purposes results are recoded, values from 0 to 1.49 as 1, from 1.5 to 2.49 as 2, etc. N=61.

| Difference in scores for reading in English and Norwegian (Norindex-Enindex1) | Respondents | Respondents in percent |
|---|---|---|

| | | |
|---|---|---|
| -3 | 4 | 6 |
| -2 | 6 | 10 |
| -1 | 0 | 0 |
| 0 | 9 | 15 |
| 1 | 27 | 44 |
| 2 | 12 | 20 |
| 4 | 1 | 2 |
| 5 | 2 | 3 |
| Total | 61 | 100 |

Since this sample comprises ten respondents who do not have Norwegian as their first language, it seems reasonable that a number of respondents find reading in English easier than in Norwegian. This can explain the ten respondents with scores of two or three points in favor of English, as can be seen in Table 5.3. In contrast, a larger number, 15 (25%) out of the 61 respondents have a difference of two points or more between their scores for reading in Norwegian and English, indicating that they find reading in the latter language more difficult.

To return to Figure 5.1, designating a cut-off point on the scale between 1 and 7 where the self-assessment scores for English reading proficiency fall below acceptable levels requires benchmarking these values against those of actual reading test scores. This is done in section 5.4 below, but is not possible here. Nevertheless, it seems reasonable to assume that some, or many of the 50% respondents scoring below a mean value of 5.0 for *Enindex1*, in particular the 10 (16%) respondents with scores below 4.0, are experiencing serious difficulties reading their English textbooks. That 10 (16%) scored 4.0 or below on *Norindex* as well is more unexpected, and only 4 of these were among the 10 respondents who did not have Norwegian as their first language. This is perhaps, indicative of the difficulty of the subjects in question, and of reading problems in general.

**Language and reading difficulties**

The next stage of the analysis was to elicit the nature of possible reading problems. In item 3.3 of the survey respondents were therefore asked to indicate what they perceived to be their main difficulty when reading their English textbooks; unfamiliar vocabulary, difficult sentences, high information density, finding coherence in the text, or understanding the content. The results are displayed in Figure 5.2 below:

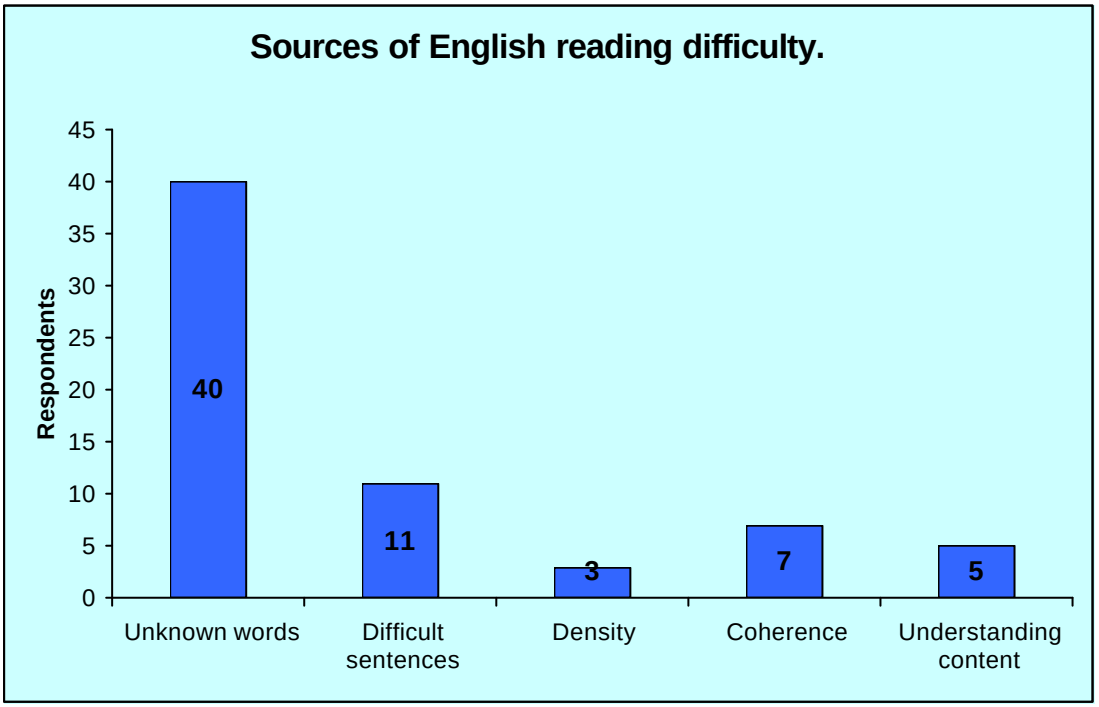



Figure 5.2. Sources of reading difficulty in percent (only one answer per respondent). N= 66.

The fact that 40 (60%) of the respondents consider unfamiliar vocabulary their main difficulty supports claims about the importance of a large vocabulary for fluent reading in a foreign language, as discussed in section 3.3. On the other hand, this item does not provide information on the extent of the problem, or about how the respondents handle or do not handle unknown words. This lead to the inclusion of new items in the revised questionnaire on how the respondents handle difficulties with unknown words (see Appendix 2, items 51 to 57).

As discussed in subsection 3.4.1, a slow reading speed can be an indication of processing difficulties when reading English, for instance due to struggling with unfamiliar vocabulary. In item 3.2 in the survey respondents were therefore asked to rate their reading speed in English compared to in Norwegian. The results are displayed in Figure 5.3 below.

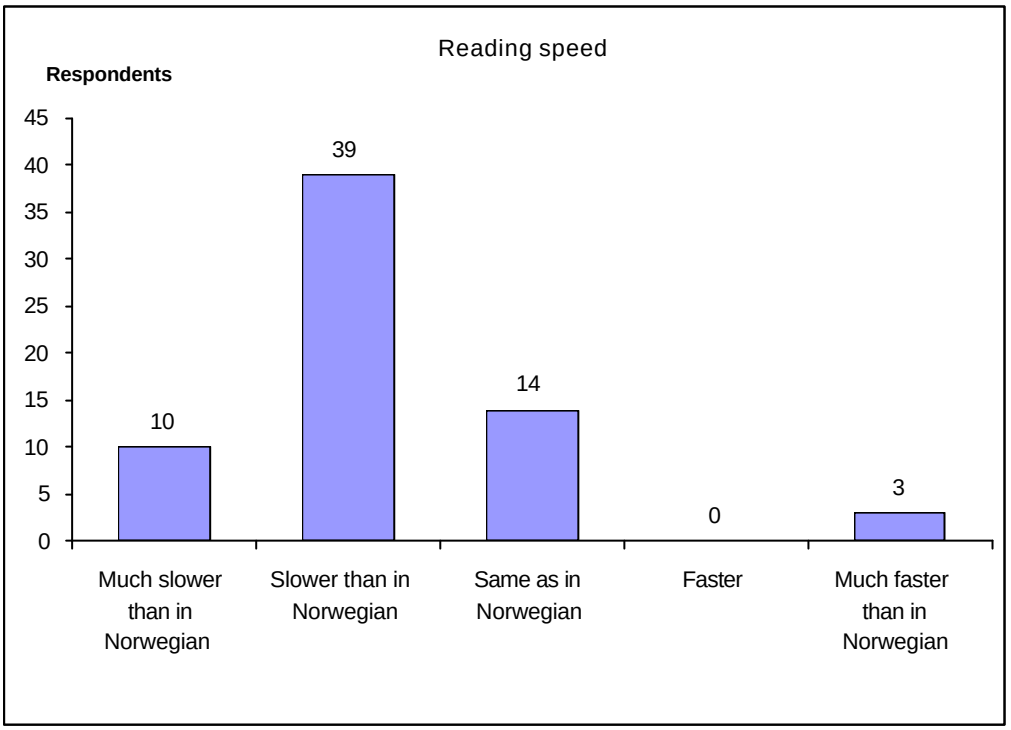



Figure 5.3. Reading speed in English compared to Norwegian. N=66.

That 49 respondents altogether (74%) read more slowly in English than Norwegian is hardly unexpected. That 10 of these (15%) indicate they read much slower in English than in Norwegian raises the possibility that these respondents have serious difficulties. It is also interesting to note that reading speed has a fairly high and positive correlation with *Enindex2* [40], r=.63, p< .01, N=66.

A third way of examining whether language difficulties affect reading proficiency can be done by checking how *Enindex1* and *Norindex* covary. To the extent that reading proficiency in one language follows the other, a positive correlation would indicate that the respondents' English proficiency is adequate to allow them to use the same reading processing skills and strategies as in their first

[40] In this survey the index *Enindex2* is, as mentioned above, used for all calculations involving English reading proficiency as a variable except for comparison with the index for Norwegian, *Norindex*.

language. A low correlation between English and Norwegian would indicate that this is not the case, perhaps due to language problems, such as with unfamiliar vocabulary. Some respondents might even be so poor in English that they fall below the " Linguistic Threshold Level" where they are unable to draw upon their L1 processing skills and strategies for reading in English (see section 3.3).

The analysis of this sample gave a very low and statistically non-significant correlation (r = -.004, p= .90, N= 61) between the additive indices *Norindex* and *Enindex1*. Excluding the 10 respondents who did not have Norwegian as a first language from the calculations gave a slightly higher and positive, but still non-significant correlation, r= .1, p= .31, N= 51. These results indicate that language difficulties are affecting reading in English compared to Norwegian. This will be re-examined in the following surveys using improved additive indices measuring reading in English and Norwegian.

**Study experience and reading proficiency**

When discussing student reading of English textbooks, colleagues and acquaintances invariably claim that even though they had problems at the outset of their studies, reading difficulty decreased with time. Since it does seem plausible that reading skills improve with practice, an item asking how many credits students had completed prior to the course they were attending at the time of the survey (item 1.2) was included in the questionnaire. Answers are on a scale ranging from 1 (2 to 10 credits), to 5 (40 or more), and as mentioned above, 18% of the respondents had studied for about a year, 45% two years or more. This variable was correlated with *Enindex2.* A positive correlation here would indicate that reading proficiency covaries with study experience.

Contrary to expectations, the bivariate correlation between *Enindex2* and the number of completed credits was almost non-existent and not statistically significant, r = -.05, p = .72, N= 55. With N= 55 there are 11 missing answers, probably due to the omission of a category for no credits completed. This was corrected in the revised questionnaire.

**EFL courses and instruction**

The respondents' choice of upper secondary EFL courses was one of the factors expected to covary with English reading proficiency. As discussed in Chapter 2, upper secondary Norwegian students in the General Studies branch have to complete the compulsory, five lessons-per-week Foundation Course in their first year. Afterwards many opt for a one-year, three lessons-per-week General English course, and about a third of the students opt for the Advanced English Course (see tables 2.2 and 2.4). It would be reasonable to assume that respondents who have completed the latter course would get higher scores in reading proficiency than those who have not. An item (5.1) about which upper secondary English courses the student had completed was therefore included in the questionnaire.

In this sample, 21 (32%) of the students only had the first year Foundation Course, 17 (26%) had the General English Course, 2 (3%) the first year of the Advanced English Course and 14 (21%) had both years of this course. There were 12 missing answers, either due to foreign examinations, or to missing rubrics in the questionnaire that did not allow for students having other upper secondary English courses, for instance from the Business College branch (see Table 2.1).

Since the item comprised nominal categories, I constructed dummy variables for the 19 students with a three or five hour elective course in the second year (VK1), and one for those with both years of the Advanced English Course (VK2). For both items the correlations with *Enindex2* were low and not statistically significant, for VK1 r= .06, p= .65, N= 54, and for VK2 r= .14, p= .30, N= 54. Given the low N, and the restricted range of the dichotomous dummy variables, these results are by no means conclusive and are checked in the following surveys.

When processing the questionnaires, it rapidly became clear that a number of items about different aspects of EFL instruction were poorly designed and unable to provide useful information (see items 7.1 to 7.9). A number of new or revised items on EFL instruction were therefore included in the revised questionnaires (Appendices 2 and 3). Those items that proved useful were the items for grades (item 5.3), and degree of interest in the subject (item 5.2). Others were on the extracurricular reading of novels (item 6.1), of English periodicals (item 6.2), on reading on the Internet (6.3), and on watching English movies and TV programs (item 6.4)

**English media use and reading habits**

Another expectation in this survey was that extensive exposure to English through the media or reading would covary with reading proficiency. In two earlier studies of EFL reading that I carried out as a practicing upper secondary school teacher I found that the number of English novels read correlates positively with student reading comprehension (Hellekjær, 1994a, 1995). This was also found for Norwegian in a recent survey of Norwegian 15 year-olds (Lie, Kjærnsli, Roe, & Turmoe, 2001). Items about student reading habits and media use were therefore included in the present survey. These were the number of English novels they had read (6.1), about the reading of periodicals (item 6.2), Internet use (item 6.3), and how often they watched English language films, TV shows or videos without Norwegian subtitling (item 6.4).

When correlated with *Enindex2* the item for novel reading (item 6.1) has a correlation of r =.4 (p<, 01, N = 61) in the present study, with low and non-significant correlations for the other items. This mirrors the finding for reading of novels in upper secondary EFL instruction on reading performance, and is also followed up in the next surveys.

**Grades and motivation**

Another of the expectations in this study was that the respondents' interest or lack of interest in English (item 5.2), as well as grades (item 5.3), would show a positive correlation with English reading proficiency scores – *Enindex2.* Somewhat unexpectedly, this was not the case. The correlations were low, r= -.08 for interest, and r=.15 for grades. Neither was statistically significant. These are also checked in the following surveys.

### 5.2.4. Discussion

This pilot survey had two main goals. One was to "troubleshoot" the questionnaire, to see whether the respondents understood the items, and to what extent these provided useful information (Appendix 1). The second was exploratory, to see whether any of the respondents actually had difficulties reading the English texts and textbooks on their reading lists, i.e. getting an initial picture of the degree and nature of possible problems, and identifying the main variables covarying with reading proficiency.

In this discussion I will, after a brief overview of the results and discussion of reliability and validity, focus on necessary revisions of the questionnaire and the design of the follow-up surveys. The main summative analysis, however, comparing the findings in this and the other surveys will, as noted above, follow below in section 6.1.

To start with the exploratory aspect; the findings in this pilot survey indicate that the respondents in this sample found reading English textbooks more difficult than Norwegian ones, though only a limited number of respondents experienced serious difficulties. The respondents consider unfamiliar vocabulary their main source of difficulty, followed by complex sentences. Not unexpectedly, most read more slowly in English than in Norwegian. In this sample it appears that reading proficiency does not improve with study experience. Nor does reading proficiency in Norwegian covary with English proficiency, which can be interpreted as an indication of language problems affecting reading. Instead, the most important variable turned out to be the amount of extracurricular reading. In comparison, completing the advanced elective English course did not show any covariation.

**Revisions of the questionnaire and follow-up survey design**

With regard to the questionnaire, this pilot survey showed the viability of using questionnaires where self-assessment items were used as indicators of reading proficiency. It also made apparent the need for a number of revisions. The most important revision was the inclusion of additional items allowing the construction of comparable additive indices for English and Norwegian, including an additional item for reading speed in both languages. Next came the need to modify items where key categories are missing or to allow for statistical processing (see for instance items 1.2 or 7.1 to 7.9). Third, it revealed the need for new or improved items on how students handle unknown vocabulary in particular, and for items on reading strategies.

These considerations contributed to new and revised versions of the questionnaire in this pilot survey. The first version of the new questionnaire, Appendix 2, was used for the surveys reported on in section 5.3 and 5.4. A slightly revised version of this questionnaire again, Appendix 3, was used for the surveys reported on in section 5.5 and 5.6.

With regard to research design this pilot survey also made clear the need for a larger sample comprising both beginner and advanced students. This would, for

instance, make it possible to test whether reading proficiency covaries with study experience. It was also important to keep the number of respondents who did not have Norwegian as their L1 to a minimum, or, alternatively, have a sufficiently large sample to be able to exclude these from calculations.

**Reliability and validity**

In Chapter 4 I discuss the overall questions of reliability and validity for this study as a whole. Here I will therefore just briefly mention points that are specific to this pilot survey.

The first are the threats to both reliability and validity caused by the many poorly designed items in this pilot survey. With regard to the former, one of several examples would for instance be item 1.2, where my failure to include a category for no completed credits resulted in 11 missing answers. An example of the latter is my use of a five-point scale in item 3.2 on reading speed. This meant that this item could not easily be included in the main additive index measuring English reading proficiency, *Enindex2.* The other items used seven-point scales. Likewise, the failure to include a number of items for reading in Norwegian as for English detracts somewhat from the reliability and validity of the comparison of reading in the two languages. On the other hand, the reliability coefficients for the additive indices *Norindex*, *Enindex1,* and *Enindex2* used to measure reading proficiency for English and Norwegian indicate that the items for each are measuring the same underlying trait.

Whether the underlying variable measured by these indices is, in fact, reading proficiency in English and/or Norwegian, brings us back to the question of construct validity, which is discussed in more detail in sections 4.4 and 4.5. For *Enindex2* it can be mentioned that it included four of the five items used in the additive index for English proficiency that is validated using the IELTS Academic Reading Module in the survey reported in section 5.4. For the purposes of this pilot survey, there is therefore reason to believe that this index provides a reasonably useful and valid measure of the respondents' levels of English reading proficiency. This, however, is less certain with *Norindex* and *Enindex1.*

Last is the issue of external validity. The non-representative sample in this survey, and in particular the ten respondents who did not have Norwegian as their L1,

preclude any claims in this respect. Nevertheless, to the extent findings here are reflected in the repeat surveys, I would claim that these add to the overall validity of the larger study.

### 5.2.5. Summary

The main goal of this pilot survey was, first and foremost, to "troubleshoot" the questionnaire and, if necessary, the survey design. The experience gained lead to a revised questionnaire used in the following four surveys of this study, and to a larger sample comprising both beginner and advanced respondents in the survey presented in section 5.3. It was also exploratory, and offered a useful picture of the degree and nature of the respondents' reading difficulties. Most important, it showed that a large enough number of respondents, about 25%, found reading English texts and textbooks so difficult that it merited further investigation.

## *5.3. STUDENT READING OF ENGLISH TEXTBOOKS: A SECOND SURVEY AT THE UNIVERSITY LEVEL*

### 5.3.1. Introduction

This survey builds upon the pilot presented in section 5.2 above. It uses a modified questionnaire (Appendix 2) to see whether, and to what extent the student respondents in this sample have difficulties reading English textbooks, and to examine the nature of possible difficulties. It also attempts to identify variables that covary with reading proficiency that may explain variations in English reading proficiency.

As in the pilot survey self-assessment items that are combined into additive indices are used as indicators of the dependent variables: reading proficiency in English and Norwegian. Other items provide information on independent variables such as background, upper secondary education, and study experience. The sample size allows for the use of multiple regression analysis in addition to comparing mean values, percentages, and calculating bivariate correlations.

### 5.3.2. Sample and method

**Sample**

As mentioned in subsection 4.6.3, the respondents in this survey are 578 students from three faculties at the University of Oslo, Norway: Education, Mathematics and Natural Sciences, and Social Sciences. All had English textbooks on their reading lists. Based upon experience gained from the pilot survey (section 5.2), efforts were made to assure a large proportion of beginner student respondents in addition to those from more advanced levels, preferably master level courses in the same or comparable subjects. The distribution and numbers of respondents according to study program and level are displayed in Table 5.4 .

Table 5.4. Student respondents according to faculty, program, and level of study.

| Faculty | Study program | Beginner level | Advanced level | Total |
|---|---|---|---|---|
| Faculty of Education, University of Oslo | Pedagogy, Foundation level | 59 | | 159 (28%) |
| | Pedagogy, Advanced level | | 51 | |
| | Special Needs, Extension Course | 49 | | |
| Faculty of Mathematics and Natural Sciences, University of Oslo | Chemistry 100 | 145 | | 266 (46%) |
| | Physics 050 | 19 | | |
| | Biochemistry 200 | | 71 | |
| | Biology 200 | | 31 | |
| Faculty of Social Sciences, University of Oslo | Political Science, Foundation level | 91 | | 153 (26%) |
| | Political Science, Advanced level | | 62 | |
| Total | | 363 (63%) | 215 (37%) | 578 (100%) |

It should be mentioned that the Biochemistry 200 and Biology 200 courses are advanced, but not quite master level courses. They were selected because the master level courses at the Faculty of Mathematics and Natural Sciences were highly specialized with few students per group and therefore difficult to survey. Another compromise concerns the Special Needs Extension Course respondents in the sample. Checking revealed that the reading lists of Foundation level course did not include English texts and textbooks. Respondents from the Special Needs Extension Course were included instead. The respondents in the sample come from counties all over Norway, with the majority from Oslo and adjacent counties. Of the 578 respondents, 45 (8%) did not have Norwegian as their first language. The majority of students were female, 427 (74%).

With regard to upper secondary course selection, 265 respondents (46%) had completed the Advanced Mathematics Course, which indicates how many of them had specialized in the Natural Sciences. A lower number, 188 (33%) had taken the Advanced Social Studies Course. In comparison, 205 (36%) had completed the Advanced English Course.

**Method**

The survey was carried out towards the end of the 2000 fall and the 2001 spring terms. I started by contacting the directors of the departments in question and requesting permission to carry out the survey. All were positive, and helped find lecturers of relevant courses at the beginner and advanced levels who I could contact.

At the Faculty of Mathematics and Natural Sciences, with the exception of the Physics 050 course, students filled in the questionnaires during compulsory laboratory sessions. At the other two faculties students present were asked to fill in the questionnaires during lectures and hand them in upon leaving. Two problems appeared. One was the number of Pedagogy students. At both beginner and advanced levels the numbers of students were rather low. Since the goal was at least 50 to allow for comparisons between groups and levels, this meant the survey had to be repeated the following semester. The second problem was the advanced level Political Science students who were asked to fill in the questionnaires at home and deliver them to the lecturer. This gave a low return rate, which meant the survey had to be repeated the following semester for this group as well. I consider this repeat sampling a necessary, but less-than-optimal solution since it was too late in the semester to survey additional groups of students.

With regard to calculating the response rate it was not possible to attend all sessions and count the students who were present. This left two other options. The first was comparing the number of respondents with students who had registered for examinations. The other was using the number of students who actually showed up for examinations, a group that presumably included most of those who were present for lectures when the surveys took place. In Table 5.5 below I have calculated the response rates using both the number of students showing up for examinations in the subjects surveyed as well as those who had registered for examinations. As can be seen, the survey reached about 51% of the students registered for the respective examinations that term, compared to 65% of those who showed up for examinations. Both figures are fairly low, but I would argue that the latter percentage best reflects the number of active students. This variation between attendance rates and registered students, in particular at the beginner level compared to the advanced levels is an interesting issue. It is also indicative of the practical problems involved in surveying

students at the college and university level. Further discussion of these issues, however interesting, falls outside the scope of this study.

Table 5.5. Response rates by course, level, and time of survey compared to examination registration and completed examination Figures. N= 578.

| Time of survey | Course, course code, and level | Students registered for examinations. Completed examinations in (). | Number of respondents taking part in the survey | Response in % of examination registrations | Response in % of completed examina-tions |
|---|---|---|---|---|---|
| Fall 2000 | Pedagogy (PED121U), beginner level | 120 (89) | 29 | 24 | 32 |
| | Pedagogy (PED311S), advanced level | 51 (37) | 30 | 59 | 81 |
| | Chemistry 100 (KJ100), beginner level | 226 (203) | 145 | 64 | 71 |
| | Physics 050 (FYS050), beginner level | 57 (49) | 19 | 33 | 38 |
| | Political Science (STAGH-1), beginner level | 204 (160) | 91 | 45 | 57 |
| | Political Science (STV621-3), advanced level | 64 (52) | 30 | 47 | 58 |
| Spring 2001 | Pedagogy (PED121U), beginner level | 105 (54) | 30 | 29 | 55 |
| | Pedagogy (PED311S), advanced level | 24 (14) | 21 | 88 | 150 * |
| | Political Science (STV621-3), advanced level | 95 (78) | 32 | 34 | 41 |
| | Biochemistry 200 (KBJ200), advanced level | 85 (78) | 71 | 84 | 91 |
| | Biology 200 (BIO200), advanced level | 43 (39) | 31 | 72 | 79 |
| | Special Needs Extension Course (SPPMTL 1), beginner level | 51 (41) | 49 | 96 | 119* |
| Total | | 1125 (894) | 578 | 51% | 65% |

*This high percentage is due to the presence of students from other levels or studies were also attending the PED311S lecture.

**Measuring reading proficiency: the self-assessment items and indices**

In the revised questionnaire used in this survey (Appendix 2), the 74 items could be grouped into three categories: indicators of the dependent variables English and Norwegian reading proficiency, indicators of the independent variables expected to covary with reading comprehension, and items providing information about student

background. Based upon experience with the pilot survey six identical items were used as indicators of reading proficiency in English (items 40 to 45) and Norwegian (items 34 to 39) respectively (see Appendix 2). As discussed in subsection 4.3.2 above, the 6 self-assessment items were to elicit degrees of reading difficulty at different apects of the reading process (see Table 4.2). The items for reading in English, 40 to 45, were used to construct an additive index for English, in the following called *Enindex*. Those for Norwegian, 34 to 39, were used for a comparable index for Norwegian, in the following called *Noindex*. According to the Cronbach-Alpha test, for this sample the reliability of these indices was high, $\alpha = .84$ for *Noindex*, and $\alpha = .94$ for *Enindex*.

Concerning the validity of these indices, it can be mentioned that in the survey presented in section 5.4 below the scores from an identical index for English are correlated against actual scores on a reading test, the IELTS Academic Reading Module test (Appendix 4). With 53 respondents the bivariate correlation between *Enindex* and the IELTS test scores was $r = .72$, $p<.01$, $N=53$. As discussed in subsection 4.5.1, this argues for the construct validity of the self-assessment items used to measure English reading proficiency in the surveys presented in sections 5.3 and 5.4.

### 5.3.3. Results

**Reading difficulties**

Comparing the mean values for the two indices *Enindex* and *Noindex* is one way of examining whether respondents experience the reading of texts and textbooks in English more difficult compared to Norwegian. Little or no difference would mean that the respondents find reading in English no more difficult than in Norwegian. To the extent the mean value for *Enindex* is lower than for *Noindex* this would in turn indicate that respondents find reading in English more difficult. The different mean values are displayed in Table 5.6 below.

Table 5.6. Findings from the *Enindex* and *Noindex* indices. The scale is from 1 (impossible to understand to) 7 (no difficulties).

| | ***Noindex*** | ***Enindex*** |
|---|---|---|
| N | 572 | 576 |
| MEAN ( $\bar{X}$) | 5.7 | 4.6 |
| STANDARD DEVIATION (SD) | 0.73 | 1.1 |

As is displayed in the table, the mean value for *Enindex* is $\overline{X}$ = 4.6, which is clearly below the $\overline{X}$ = 5.7 of *Noindex*. Furthermore, as is displayed in Figure 5.4 below, the scores for *Noindex* are skewed to the right around a median value of 5.8 while those for *Enindex* are more evenly distributed with many well below the median value of 4.7. Selecting for faculty, or comparing beginner students with no completed credits with those with 40 credits has a minimal effect on these values.

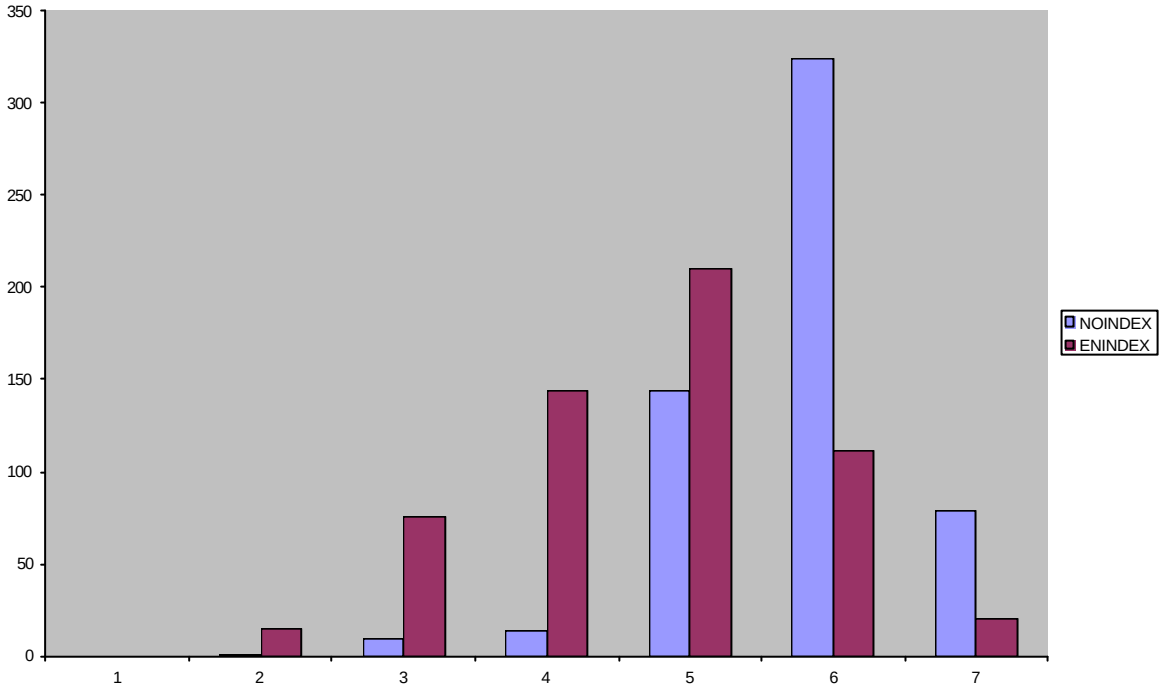



Figure 5.4. Distribution of reading proficiency scores from the *Noindex* and *Enindex* additive indices. The scale is from 1 (impossible to understand) to 7 (no difficulties). For display purposes results have been recoded, values from 0 to 1.49 being counted as 1, from 1.5 to 2.49 as 2, etc.

That Norwegian students have greater difficulties reading English than Norwegian textbooks is only to be expected. The first question this raises is at which score their problems can be said to be serious, the second question is how many students this involves. One way of examining this is looking at the difference between the scores in the two languages for the individual respondents.

Table 5.7. Distribution of differences in scores for reading in Norwegian (*Noindex*) and in English (*Enindex*). Values below 0 indicate that respondents find reading English easier than in Norwegian, for those above 0 that it is more difficult than in Norwegian. For display purposes results have been recoded, values from the lowest to -3.49 being counted as -3, from -2.5 to -1.49 as -2, etc.

| Difference in scores for reading in Norwegian and English | Respondents | Percentage |
|---|---|---|
| -3 | 2 | .4 |
| -2 | 3 | .5 |
| -1 | 12 | 2 |
| 0 | 113 | 20 |
| 1 | 250 | 44 |
| 2 | 130 | 23 |
| 3 | 49 | 9 |
| 4 | 6 | 1 |
| 5 | 3 | .5 |
| Total | 568 | 100.0 |

As displayed in Table 5.7, only 130 respondents (23%), have scores that indicate that they find reading in English either easier than, or as easy as in Norwegian. About a third, 188 (32%), find English more difficult with a gap between the languages of two points or more. This makes language problems the most probable explanation.

To return to the distribution of scores displayed in Figure 5.3, the next question is whether it is possible to determine a cut-off point on the 1 to 7 point scale where reading proficiency fall to a level which indicates serious difficulties. This requires comparison with actual reading tests, which is done in section 5.4 below. There, a score of 4 or less was found to correspond with IELTS test scores indicative of non-mastery of reading in English. For *Noindex* scores this means that only 20 respondents (3%) fall below this level. For *Enindex*, however, this number increases to 185 respondents (32%). This percentage is reflected in the differences in the mean scores for *Noindex* and *Enindex* displayed in Table 5.7 above, where about 32% of the respondents have a difference of 2 points or more indicating greater difficulties reading in Norwegian.

**Areas of reading difficulty**

One of the goals of this survey is to look at the types of problems affecting English reading proficiency. As displayed in Figure 5.2, for instance, 60% of the respondents in Section 5.2 considered unfamiliar vocabulary a key difficulty, although this result might be exaggerated because the item allowed for only one answer. In the revised questionnaire (Appendix 2) this item was replaced with several new ones for both languages. All use seven-point Likert scales, and examine reading speed (34 and 40), in addition to difficulties with unfamiliar words (35 and 41), difficult sentences (36 and 42), textual coherence (37 and 43), textual density (38 and 44), and understanding of content (39 and 45). As mentioned these items were also used in the additive indices measuring Norwegian and English reading proficiency. In Table 5.8 the mean scores for these items are displayed. The 45 students who do not have Norwegian as their first language have been excluded from the calculations.

Table 5.8. Comparison of reading difficulties between English and Norwegian, mean scores ( $\overline{X}$ ) and standard deviations (SD) for items 34 to 39 for Norwegian and the equivalent items for English, 40 to 45.

| Items. | Norwegian mean scores and standard deviations (items 34 to 39) | English mean scores and standard deviations (items 40 to 45) |
|---|---|---|
| How quickly do you read the texts on your reading lists? | 5.43 (SD= 1.2) | 4.31 (SD= 1.4) |
| Indicate on the scale from 1 to 7 how many words you do not understand in the texts on your reading lists. | 5.91 (SD= 0.8) | 4.47 (SD= 1.1) |
| Indicate on the scale from 1 to 7 to which extent you find the sentences in the texts difficult to understand. | 5.81 (SD= .1.0) | 4.63 (SD= 1.2) |
| Indicate on the scale from 1 to 7 to which extent you find the texts coherent when reading. | 5.83 (SD= 0.9) | 4.73 (SD= 1.3) |
| Indicate on the scale from 1 to 7 to which degree information in the texts is so densely presented that it hinders your understanding of the contents. | 5.42 (SD= 1.0) | 4.58 (SD= 1.3) |
| Indicate on the scale from 1 to 7 to which extent you find the contents of the texts understandable. | 5.79 (SD= 0.8) | 4.88 (SD= 1.2) |

* Scoring is on seven-point Likert scales from 1 (lowest) score to 7 (highest)

Interpreting the variations in the mean scores for equivalent items in Norwegian and English merits some caution. Nevertheless, the lowest means for both languages indicate that many find slow reading speed a problem in both. As illustrated by the gap between mean values for English and Norwegian with regard to vocabulary, it would seem that unfamiliar vocabulary is a key source of difficulty. This was also the

case in the pilot survey (Figure 5.2). Difficulties with complex sentences and dense texts follow close behind. Overall, the standard deviations indicate greater variation in the English scores.

All in all, the data displayed in Tables 5.7 and 5.8, and Figures 5.3 and 5.4 above, indicate that students find it more difficult to read in English than in Norwegian. This raises the issue whether reading proficiency in Norwegian and English covary at all, that is to say to what extent is it reasonable to expect that if a respondent reads well in Norwegian, he or she also does well in English. That this is partly the case is indicated by a bivariate correlation between reading in Norwegian and in English (as measured by *Noindex* and *Enindex*) of r=.43, p>.01, N=528. The 45 respondents for whom Norwegian is not their first language are excluded.

One possible reason why this correlation is not higher is the number of respondents that fall below the Linguistic Threshold Level (see section 3.3), that is to say their level of English proficiency is so poor that they are unable to transfer their L1 reading processing skills and strategies to English. These respondents will manifest high scores for reading in Norwegian in contrast to low scores for English. In the scatter-plot in Figure 5.5 below, the respondents in this category can be found in the upper, left-hand quadrant of the plot. Those who read well in both languages can be found in the upper, right hand quadrant, while the smaller number who read poorly in both languages are to be found in the bottom left hand quadrant.

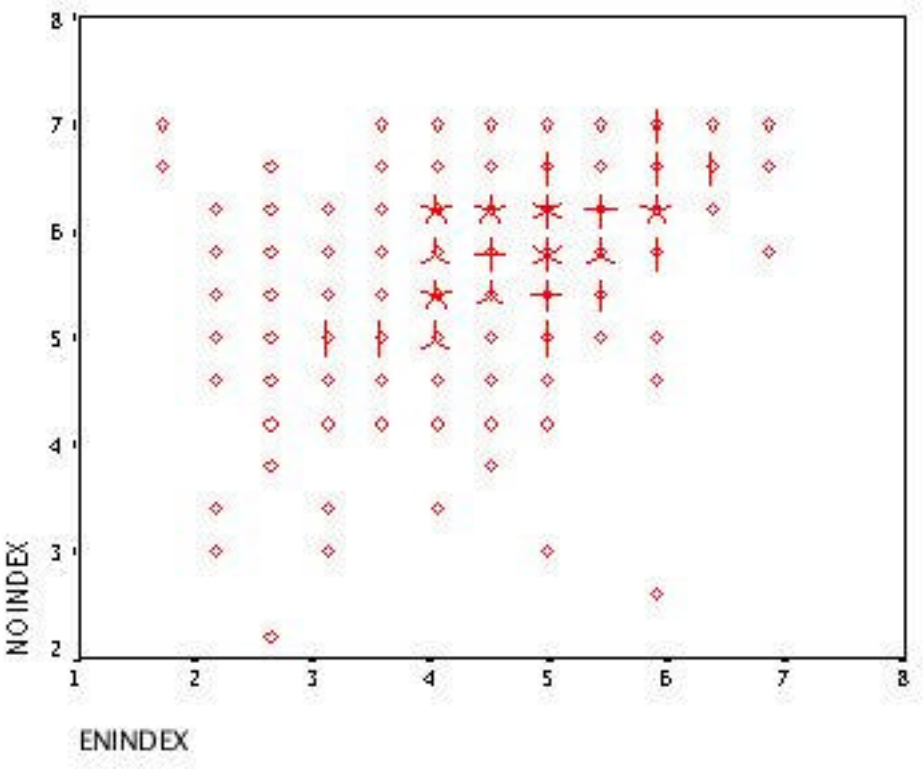



Figure 5.5. Scatter-plot, using the 5-case sunflower option, showing the distribution of scores for *Enindex* and *Noindex*. A score of 1 indicates serious reading difficulties, 7 no problems. The 45 respondents who did not have Norwegian as their L1 are excluded from the calculations. N= 533.

To sum up, the comparisons of the reading proficiency between languages made above go to show that a considerable number of respondents have markedly greater problems reading in English than in Norwegian. As mentioned, the most probable explanation for this is their levels of English proficiency. For some it would seem that their deficiencies in this respect are so serious that they fall below the Linguistic Threshold Level.

**Study experience and reading proficiency**

When discussing student reading of English textbooks, many expect reading difficulty to decrease with time. When this was examined in the survey presented in section 5.2 no correlation between study experience and reading proficiency was found. The questionnaire used for this survey (Appendix 2) included a redesigned item (item 29) asking how many credits respondents had completed at the time of the survey. Numbers varied from 131 (23%) with no Norwegian credits, 58 (10%) with 2 to 10, and 260 (45%) with 40 or more (one Norwegian credit equals three ECTS credits.

When this item was correlated with the additive index *Enindex* as well as *Noindex*, no significant correlations could be found for the group as a whole. However, closer analysis shows that the majority of the Faculty of Education and Social Sciences students had completed 40 credits or more, while the majority of the beginner students were from the Faculty of Mathematics and Natural Sciences. This means that the results might be reflecting study affiliation instead of study experience. I therefore compared respondents by faculty.

It appeared that for respondents at the Faculty of Mathematics and Natural Sciences there was a low, positive correlation indicating improvement in reading proficiency for English with study experience, $r = .11$, $p < .05$, $N = 349$, but not for Norwegian. In contrast, at the Faculties of Education and Social Sciences samples no significant correlation could be found for English, only for reading in Norwegian, $r = .20$, $p < .05$, $N = 222$.

For English, one possible interpretation for these low or non-existent correlations is that students do improve over time with regard to reading proficiency, but that they notice little improvement due to the increasing difficulty of the subjects they are studying. Another is that they find reading the texts and textbooks in question so difficult that they do not acquire new terms and expressions from context. A third is that the number of English texts on the reading lists determines improvement, that is to say only respondents who read mostly in English experience improvement. Last, it might be that students use inefficient reading strategies, as mentioned in section 3.3, where Bråten & Olaussen (1998) found that many Norwegian students as often as not use inefficient reading/study strategies and at times only succeed through sheer effort. Although their findings are from reading in Norwegian, it seems reasonable to assume that the same might be the case for the reading of English textbooks.

**Reading habits**

Extensive exposure to English through the media or reading was expected to covary positively with reading proficiency. Items about student reading habits and media use were therefore included in this survey. In one (item 58), students were asked to indicate how many English novels they had read on a seven-point Likert scale from 1

(none) to 7 (51 or more) [41]. Likewise, students were asked about how often they read English magazines (item 60) on a scale from 1 (never) to 7 (several times daily), and a similar question on reading English on the Internet (item 61).

Table 5.9. Number of English novels read. N= 575.

| English novels read | Respondents | Percent |
|---|---|---|
| None | 8 | 1 |
| 1-5 | 96 | 17 |
| 6-10 | 95 | 16 |
| 11-15 | 74 | 13 |
| 16-20 | 71 | 12 |
| 21-50 | 123 | 21 |
| 51 or more | 108 | 19 |
| Total | 575 | 100 |

As displayed in Table 5.9, a large number of students read extensively. About half had read 16 novels or more, and of these 108 (18%) had read 51 or even more. Not unexpectedly, bivariate correlation analysis shows that this variable has fairly high and positive correlation with *Enindex* of r= .47, p< 0.01, N= 573. Furthermore, multiple regression analysis of these three variables (for reading novels, magazines). and periodicals, and reading on the Internet) with *Enindex* (items 58, 60, 61) shows that these three together have an explained variance of $R^2$ = .29.

It should come as no surprise that students who read English extensively master the reading of English textbooks better than those who have not. One possibility is that these respondents have through reading acquired a vocabulary adequate to the task of mastering the language in their textbooks, in short, have better language skills. They might also have developed efficient processing skills and strategies through practice, or better become able to transfer these from their L1. It is also possible that respondents who read extensively are select in that they come from backgrounds where literacy is highly valued. With regard to the latter point it should be kept in mind that a number of respondents (see Figure 5.5) have high scores for reading in Norwegian but poor scores for English.

[41] It should be mentioned that there was a lack of consistency in my use of the terms *bøker* (books) and *romaner* (novels) in the Norwegian versions of the questionnaires. I use novels for the English version.

In any case, as seen in section 5.2 and here, extracurricular reading seems to be one of the main predicators of English reading proficiency. This will be checked in the samples below, and analyzed in further detail in subsection 6.1.7.

**Unfamiliar vocabulary and reading proficiency**

As noted above (see section 3.3), unfamiliar words are considered a key challenge when reading a foreign language. This makes their frequency as well as the strategies respondents use to deal with them an important issue. Several items asking students how they handled unfamiliar items of vocabulary were therefore included in the questionnaire (items 51 to 57). Respondents were asked to indicate how often they used various strategies to handle unfamiliar words on a scale from 1 (never) to 7 (frequently). One (item 51) focused on the use of dictionaries. Others asked whether they guessed on the basis of their knowledge of the subject (item 52), from context (item 53), asked the lecturer (item 54) or fellow students (item 55), ignored it and kept on reading (item 56), or gave up reading altogether (item 57).

Table 5.10 Bivariate correlations on items 51 to 57 on the handling of unfamiliar words.

| Independent variables | Bivariate correlations (r) with self-assessment scores as dependent variable |
|---|---|
| Dictionary use (051) | -.17 |
| Guess meaning of word using subject knowledge (052) | .17 |
| Guess meaning of word using context (053) | .27 |
| Ask lecturer (054) | -.01 |
| Ask other students (055) | -.11 |
| I just keep on reading (056) | .04 |
| I give up reading (057) | -.50 |

Bivariate analysis shows, not unexpectedly, that several strategies correlate negatively with *Enindex*. These are dictionary use, asking fellow students or the lecturer. The highest negative correlation is for the item where students indicated how often they gave up reading due to unknown words (item 57). In other words, this means that

those who often gave up reading were those with low *Enindex* scores. This can be contrasted to the positive correlations for the compensatory strategies of guessing meaning on the basis of subject matter knowledge, r=.17 (item 52), and in particular for guessing from context r= .27 (item 53). One interpretation that the respondents who do this have a level of English proficiency that allows them to deduce word meaning on the basis of their knowledge of the subject or from context. An alternative explanation is that they have mastered these strategies. These two positive correlations, however, are too low to allow any firm conclusion to be made. What remains is that unknown vocabulary is an important issue, and multiple regression analysis for these five variables with *Enindex* shows an explained variance of $R^2$ = .30.

Furthermore, though giving up in the face of unknown vocabulary can hardly be termed a strategy, the negative correlation of r = -.50 (item 57) supports the conclusion that many students have problems reading English texts, to the extent that they frequently give up reading altogether. To investigate this further I calculated the mean score ($\bar{X}$) of *Enindex* for the 68 respondents who had a score of 4 or higher in item 57 (which asks how often they gave up reading due to unknown words). For this qroup the mean *Enindex* score was $\bar{X}$ = 3.5, well below the overall mean of 4.6. In fact, most of these respondents had *Enindex* scores below 4.0 (see Figure 5.3), which argues for this group being characterized by poor English proficiency.

That dictionary use, as well as some of the other ways of determining the meaning of unknown words, correlates negatively with reading proficiency can be due to disruption of the reading process. An alternative, or complementary, interpretation would be that it is an indication of poor English skills, meaning that the respondent is unable to guess the meaning of unknown words from context. However, selecting respondents answering 4 or higher to question 51 on dictionary use, or on guessing word meaning from context – the surrounding text – (item 53), and checking how this affects mean values of *Enindex* as compared to the mean for the rest, has no discernable effect on the mean value of *Enindex*. It therefore remains unclear whether the positive correlation between, for instance, guessing word meaning from context and reading proficiency can be attributed to a level of language proficiency that allows for the use of this strategy, or to the efficacy of this strategy. I will return to this issue in the surveys presented below and in Chapter 6, section 6.1.3 below.

**Upper secondary EFL instruction and reading proficiency**

As mentioned, the overall aim of this study is to ascertain whether, and to what extent Norwegian upper secondary EFL instruction develops the reading proficiency required to master the reading of English texts and textbooks. Thus, when the data from this survey shows that a fairly large number of respondents have difficulties reading English texts and textbooks, this is in itself an indication of the need to improve in EFL instruction in this respect.

The questionnaire includes a number of items (63 to 74) that provide information about the respondents' upper secondary EFL instruction. For reasons of space these are better examined in a separate study. Instead, I examine how completing the Advanced English Course covaries with English reading proficiency. Keeping in mind that this is a two-year, five-lessons-per-week elective course that represents a considerable expenditure of time and effort. It would be reasonable to assume that completing this course would correlate positively with the *Enindex* scores.

Below I start by examining how completing the Advanced English Course correlates with *Enindex* for all 578 respondents.[42] Next, since beginner students would probably be those who stand to benefit most from additional English instruction in upper secondary school I compared the results for the respondents who had completed one year of study (60 ECTS or less) with those who have completed more than 60 ECTS. However, as displayed in Table 5.5 above, the majority of the beginner students were from the Faculty of Mathematics and Natural Sciences, while the majority of the students from the two other faculties belonged in the category of 40 Norwegian credits or more (120 ECTS or more). I therefore also calculate the results for respondents from the Faculty of Mathematics and Natural Sciences as one group, and for the respondents from the Faculties of Education and Social Sciences as another group. The results are displayed in Table 5.11 below.

[42] As discussed in 4.7, for this I use a dummy variable for completing the Advanced English course constructed on the basis of item 23. The restricted range of this dichotomous variable will give lower correlation coefficients.

Table 5.11. Correlation coefficients for completing the Advanced English Course. *Enindex* is used as independent variable. Respondents have been grouped according to study experience, and according to faculty. The number and percentage of respondents who have completed the Advanced English Course are also provided for each group.

| Groups | Numbers and percent of respondents with the Advanced English Course. | r Correlation coefficient | p Level of significance | N Respondents |
|---|---|---|---|---|
| All respondents | 167 (29%) | .13 | .01 | 572 |
| Beginner students, less than 60 ECTS | 60 (26%) | .06 | .37 | 232 |
| Advanced students, more than 60 ECTS | 107 (32%) | .17 | .01 | 335 |
| Faculty of Mathematics and Natural Sciences students | 86 (24%) | .03 | .55 | 350 |
| Faculties of Education and Social Sciences students | 81 (37%) | .30 | .01 | 223 |

First of all, a positive correlation of r=.13 for completing the Advanced English Course for all respondents, restricted range notwithstanding, is not a convincing result. The same goes for the outcome for beginner student respondents. Experienced respondents, contrary to what was expected, had a somewhat higher and significant correlation.

This can be contrasted to the correlations for the respondents from the Faculty of Mathematics and Natural Sciences compared to those from the Faculties of Education and Social Sciences. A possible explanation for the differing results can be student selection. That is to say, the academically strongest upper secondary students as often as not choose maximum specialization in the Natural Sciences, which leaves no room for English (see subsection 2.4.1). Thus, it is possible that those who opt for the Advanced English Course at the expense of a subject such as Chemistry or Physics might be among the less motivated, or less capable compared to those who do not. This might explain the results for the students from the Faculty of Mathematics and Natural Sciences, and since these were predominantly beginner students, the results for these students as well. In this light, it is possible that the somewhat higher correlation of r= .3 for the respondents from the Faculties of Education and Social

Sciences gives a better picture of the covariation between completing the Advanced English Course and reading scores for other students. However, this result might also be due to the high number of avid readers of English.

All in all, largely due to the weaknesses in the composition of the sample, it is difficult to reach any firm conclusion about whether students who have completed the Advanced English Course have an advantage over those who have not with regard to English reading proficiency. On the other hand, this inconclusive result can also be interpreted as indicative of serious weaknesses in the Advanced English Course with regard to developing academic English reading proficiency. Selection factors notwithstanding, it does seem problematic, even unacceptable, that having completed an advanced English course with five lessons-per-week over two years does not covary with higher scores for English reading proficiency. I will therefore re-examine this issue in sections 5.4 and 5.6 below, and sum up the results in subsection 6.1.8.

### 5.3.4. Summary

The main findings in this survey can be summed up as follows:
First, as displayed in Tables 5.6 and 5.7, and Figures 5.3 and 5.5 above, this survey shows that many respondents, somewhere between 30 to 40%, clearly find reading texts and textbooks in English difficult.

Second, as displayed in Table 5.8, the main area of difficulty in reading English is by far unfamiliar vocabulary. Then come difficult sentences, and not being able to grasp the text as a coherent whole. Difficulties with unfamiliar vocabulary can at times even result in weaker respondents giving up on reading the text(s) in question. On the other hand, being able to guess the meaning of unfamiliar words from context, whether this is due to a level of language proficiency that makes this possible, or due the systematic use of such a strategy, correlates positively with English reading proficiency. Difficulties with dense texts and slow reading speed seem, to a certain extent, to be problems in both languages, but first and foremost for English.

Third, as can be seen from Figure 5.5, while many respondents were good readers in both Norwegian and English, many read well in Norwegian but not in English. For some the difference in proficiency was so large that it they apparently fell below the Linguistic Threshold Level. Variations in the respondents' difficulties with regard to the handling of unfamiliar vocabulary was yet another indication of

language deficiencies being a key source of reading problems. While poorer readers often gave up reading in the face of many unfamiliar words, those who were able to guess the meaning of these from context did better. In fact, a multiple regression analysis showed that the variables for the handling of unfamiliar words, some with negative and some with positive correlations, together explain 29% of the variance in reading proficiency ($R^2$=29).

Fourth, the most important independent variable that correlates positively with reading proficiency in English turned out to be extracurricular reading. In fact, multiple regression analysis showed that the variables for the reading of English books, periodicals, and the Internet together could explain 30% of the variance in reading proficiency ($R^2$=30%).

Finally, there were two key issues where no definite conclusions could be drawn. These were whether study experience and of upper secondary English course co-varied with English reading proficiency. With regard to whether study experience correlated positively with reading proficiency, my data did not allow for any firm conclusion. It is possible that there is an overall improvement in reading proficiency commensurate with study experience. However, this might be offset by the respondents being unable to assess their own improvement, or by increased difficulty of textbooks and subject matter in the advanced courses. This will be re-examined in section 5.4 (see also Chapter 6, section 6.1.6 below).

The second issue where no conclusion could be made concerns the extent to which completing the upper secondary Advanced English Course covaries with English reading proficiency, here used as an indication of the efficacy of Norwegian EFL instruction. As can be seen in Table 5.11, it is difficult to reach a clear conclusion in this respect. This can be due to the composition of the sample. However, as discussed in section 2.4 above, it might also be due to the Advanced English Course not being designed and taught in a way that develops academic English reading proficiency. This issue will also be reexamined below.

## *5.4. STUDENT READING OF ENGLISH TEXTBOOKS AT THE UNIVERSITY LEVEL: A VALIDATION STUDY*

### 5.4.1. Introduction

The main aim of this survey is to validate the self-assessment indices used to measure English reading proficiency in section 5.3 using the IELTS Academic Reading Module test (see 4.3.3; Appendix 4). Second, it builds upon the surveys presented in sections 5.2 and 5.3 to re-examine whether, and to what extent, the student respondents in this new sample have difficulties reading English textbooks. Last, it investigates the nature of their difficulties, and the independent variables that covary with test scores.

As in section 5.2 self-assessment items from the questionnaire (Appendix 2) are used to construct additive indices to serve as indicators of the dependent variables: reading proficiency in English and Norwegian. Other items provide information on independent variables such as background, upper secondary education, and study experience. Unlike in sections 5.2 and 5.3, in this survey the self-assessment index scores for English reading proficiency are supplemented with IELTS test scores.

Like in the previous sections, the analysis concentrates on comparing mean values, percentages, and testing for bivariate correlations. Multiple linear regression analysis will also be used to find the explained variance ($R^2$) for key items.

### 5.4.2. Sample and method

**Sample**

The respondents in this survey, as in those presented in sections 5.2 and 5.3, are university level students. The selection of students was affected by the requirement of having English textbooks on their reading lists, and the practical difficulties involved in getting student volunteers for a time-consuming test, as discussed in 4.3.1 above. For purely practical reasons, such as a small campus, available rooms, and administrative support, students at the Faculty of Informatics and Automatization at Østfold University College in Halden were first contacted and asked to participate. This was done by e-mail and during lectures. This resulted in 25 respondents from all levels of study from this faculty. Next, students at other courses using English textbooks at the neighboring Faculty of Foreign Languages and Social Sciences were also invited to take part. These were from the one-year Foundation Course in Political Science and the second-year Course of Business and Administration. The latter course was selected because the first year course did not use English textbooks. Disappointingly, only nine Political Science and ten Business and Administration respondents volunteered. Further efforts were then made to find other respondents at other institutions. This resulted in two Biology students from the University of Bergen, and six Geography students and one from Social Anthropology from the Norwegian University of Science and Technology (NTNU), Trondheim.

Due to the difficulties getting volunteers, and since 53 respondents proved adequate to test for a correlation between self-assessment and IELTS scores, no further efforts were made to recruit additional respondents. The distribution of respondents according to institution, course, and level of study, is presented in Table 5.12 below.

Table 5.12. Institutional affiliation, course and level. N= 53.

| Institution | Course and level | Number | Percentage |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Østfold University College, Halden | Computer Science 1 | 10 | 19 |
| | Computer Science 2 | 9 | 17 |
| | Computer Science 3 | 4 | 8 |
| | Computer Science, M.Sc. | 2 | 4 |
| | Political Science Foundation Course | 9 | 17 |
| | The Second Year Business and Administration Course | 10 | 19 |
| University of Science and Technology, Trondheim | Geography, foundation and extension courses | 6 | 11 |
| | Social Anthropology, foundation or extension course | 1 | 2 |
| University of Bergen | Biology (beginner course, B101) | 2 | 4 |
| | Total | 53 | 100 |

With regard to gender, 31 (58%) of the respondents were male and 22 (42%) female. Only one respondent (2%) did not have Norwegian as a first language. Not unexpectedly, 29 (55%) of the respondents had completed upper secondary school in Østfold County. The rest were fairly evenly distributed between all counties except Nordland, Troms, and Finnmark. Study experience, measured in completed credits, is detailed in Table 5.13 below.

Table 5.13. Completed Norwegian credits. One credit equals three ECTS credits.

| Credits | Numbers and percentage | Credits | Numbers and percentage |
|---|---|---|---|
| No credits | 8 (15%) | 21-30 credits | 13 (25%) |
| 2-10 credits | 3 (6%) | 31-40 credits | 4 (8%) |
| 11-20 credits | 8 (15%) | 40 credits or more | 17 (32%) |
| | | Total | 53 (100%) |

Concerning upper secondary specialization, 19 respondents (36%) had completed the advanced course in Mathematics, which gives a rough indication of how many specialized in the Natural Sciences. The advanced Social Sciences Course had exactly the same number, and the Advanced English Course 21 respondents (40%). The main difference from the surveys presented in sections 5.2 and 5.3 was, is as discussed in 4.6.3, that these respondents volunteered to take the test after lectures. It became apparent that the majority of these volunteers felt fairly confident about their levels of

English proficiency. This means that the sample is most probably skewed in favor of students with high levels of English proficiency.

**Method**

The survey was carried out during the 2001 fall and the 2002 spring terms. As mentioned above, this survey combined the questionnaire used in section 5.2 (Appendix 2) with the IELTS Academic Reading Module (Appendix 4).[43] The respondents sat in a separate room and were allowed 90 minutes to take the test and fill out thequestionaire.

The respondents were paid NOK 100,- for their efforts, and those interested offered an informal evaluation of their English proficiency based upon the IELTS test and supplementary items as an extra incentive. In accordance with the requirements of the Norwegian Social sciences Data Service (NSD), the survey was anonymous.

Testing took place under slightly varying conditions. Since the test of the Computer Science students was combined with a needs analysis for a new English course, this group was asked to write a short English text in addition to the questionnaire. An extra 10 minutes was allotted for this, but hardly any students used the time available. A supervisor was present during the test. The Political Science and the Business 2 students, along with the two Biology students at the University of Bergen, also took the tests with a supervisor present, and handed in the tests when time was up. The seven Geography and Social Anthropology students in Trondheim, unfortunately, filled in the tests at home. They were requested to stop after 90 minutes and not to use aids such as dictionaries. Since this was a low-stakes and anonymous test they would have had little reason not to follow instructions, but this cannot be assured. Nevertheless, these results were only included in the survey due to the difficulties in getting respondents. Last, to get a picture of the extent of any problems with unknown vocabulary, students in all groups were asked to underline unfamiliar words in the first and last of the three IELTS texts.

The questionnaire (Appendix 2) comprises 74 items, six of which (items 40 to 45) could be combined into an additive index measuring English reading proficiency (*Enindex*), and another six (34 to 39) for Norwegian (*Noindex*). For this sample, the

[43] Permission to use the test was given by the University of Cambridge Local Examinations Syndicate (UCLES), as noted before.

reliability for *Enindex* was ∝= .9, and for *Noindex* ∝= .7, both with six items. The remaining items provide information about independent variables expected to affect reading comprehension, and about background variables. The IELTS Academic Reading Module is described in subsection 4.3.3 above. Since the 38 items each measure different facets of the same underlying trait, reading proficiency, they are combined into an additive index (*Alltext*) to serve as a dependent variable. For this sample, the reliability according to the Cronbach-Alpha test for the 38 items was ∝= .9.

### 5.4.3. Results

**The IELTS test results**

The distribution of the scores from the IELTS test for the 53 respondents are displayed in Figure 5.6 below.

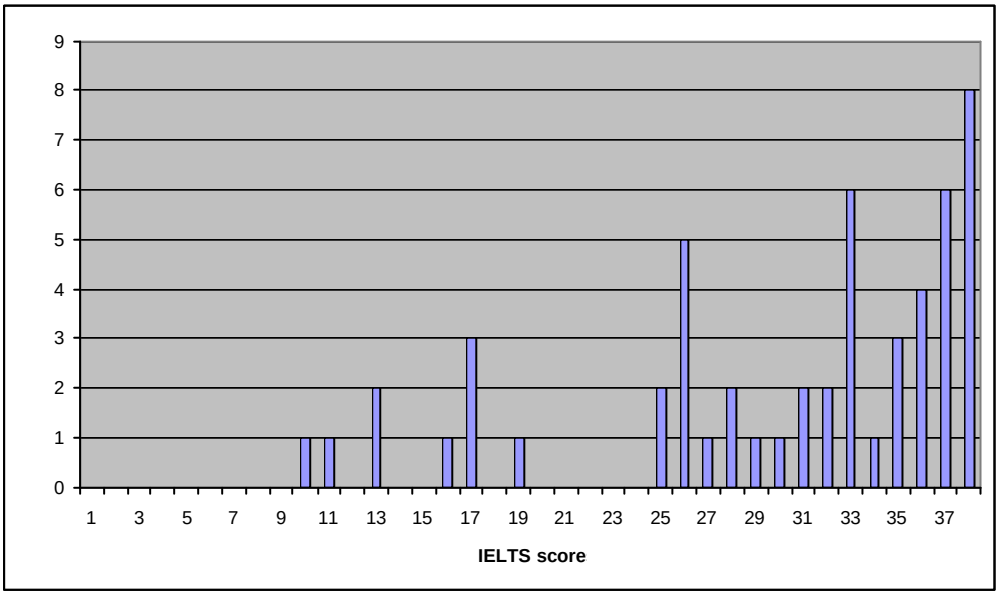



Figure 5.6. IELTS Academic Reading Module scores. The maximum score is 38, the mean, $\overline{X}$ = 30.0, and standard deviation, SD= 8.0. N= 53.

The scoring and IELTS requirements are discussed in subsection 4.3.3 above, as well as the three categories into which IELTS groups test results. The first category is for scores from 0 to 16 where test takers are considered "highly unlikely to get an acceptable score on the IELTS Academic Reading Module under examination conditions "(UCLES, 2001). In this sample the first category comprise 5 respondents,

or 9% of this sample. In the next, more indeterminate category are the four (7%) with 17 to 23 points, test takers who may or may not be capable of passing the test. Last come the 44 with an acceptable level of 24 points or better who comprise 83% of the sample. In fact, with about 40% scoring 34 of 38 points or more there seems to be a clear ceiling effect in this sample, since 21 (39%) of the respondents score 35 points or better.

That 83% out of a sample of 53 Norwegian students are capable of passing the IELTS Academic Reading Module should be considered an acceptable result. Ideally, this would be a minimum level for Norwegian students in general, in particular with the many advantages Norwegians have with regard to exposure to English through the media, not to mention linguistic and cultural similarities. However, it must be taken into consideration that the respondents taking part in this survey are volunteers, and as likely as not fairly confident about their English skills. In fact, one respondent mentioned that many who did not feel so confident declined to volunteer. In addition, the 25 Computer Science respondents who comprise almost 50% of the sample were at the outset quite select because of heavy competition for admittance to their study program. In other words, it is therefore quite probable that selection factors have lead to the overall scores for this sample being higher, perhaps much higher, than would be the case with a representative sample of Norwegian students.

In this sample, there are, nevertheless, a number of respondents with low IELTS scores. The low scores can be due to their giving the wrong answers, or to their reading and working so slowly that they failed to answer many of the test items. In Table 5.14 below the mean values for correct answers, wrong answers, unanswered items, and for wrong and unanswered items in a single category are presented.

Table 5.14. Breakdown of IELTS scores. The mean values are for correct, wrongly answered and unanswered items as separate categories, and for wrong and unanswered questions put together in a single category. The minimum and maximum scores for each category are also provided. The maximum score is 38.

| | Correct answers | Wrong answer | Unanswered | Wrong and unanswered |
|---|---|---|---|---|
| N | 53 | 53 | 53 | 53 |
| Mean ( $\overline{X}$ ) | 30 | 5 | 3 | 8 |
| Std. Deviation (SD) | 8.0 | 5.0 | 4.8 | 7.9 |
| Minimum and maximum scores | 11-38 | 0-26 | 0-19 | 0-26 |

As can be seen, the mean for unanswered items is low, $\overline{X} = 3$ (SD = 4.8). Nevertheless, it goes to show that a number of students failed to answer many of the items, one as many as 19 out of 38 possible. As a rule the they left the items towards the end of the IELTS test unanswered. As discussed in subsection 3.6.4, this was probably due to their reading in the slow and careful way that Urqhuhart and Weir (1998: 87) claim is a common outcome of FL instruction. To what extent other respondents have this problem as well will be examined in sections 5.5 and 5.6 below.

**Self-assessment versus IELTS scores**

As in the surveys presented in sections 5.2 and 5.3 , self-assessment items where respondents assessed their reading difficulties with English and Norwegian texts and textbooks were combined into the additive indices, *Enindex* and *Noindex*, for use as dependent variables. The IELTS items were combined into *Alltex*. In this survey *Enindex* scores are benchmarked against those for the IELTS test (*Alltex*), to see how self-assessment scores for the reading of English textbooks match actual test scores. The comparison is displayed as a scatter-plot in Figure 5.7 below.

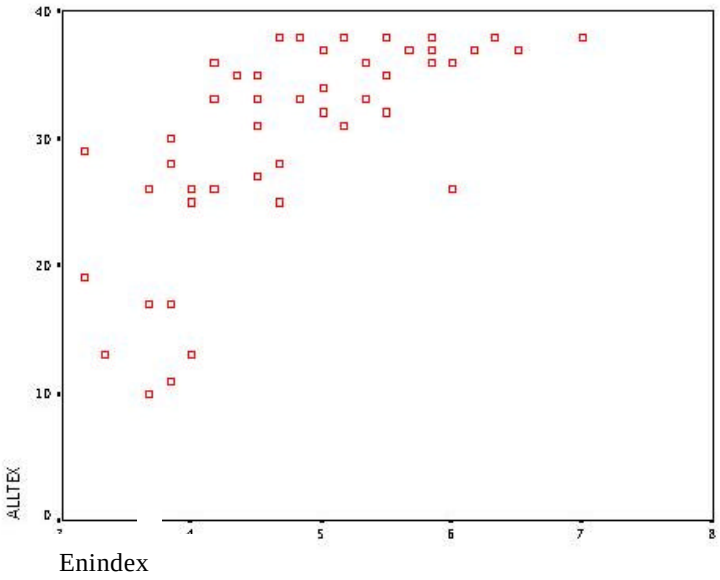



Figure 5.7. Scatter-plot with scores of the self-assessment index *Enindex* and IELTS reading scores (*Alltex*). *Enindex* scores are on a scale from 1 ( impossible to understand) to 7 (no difficulties). The maximum IELTS score (*Alltex*) is 38. N=53.

As can be seen in the scatter-plot, the distribution of the scores reflect those of a high bivariate correlation between *Alltex* and *Enindex*, r= .72, p<.01, N= 53., This, as

discussed in point 4.5.2 above, reflects other studies on the validity of low-stakes self-assessment on items where respondents are asked to identify areas of difficulty. Despite the low number of respondents (N= 53), this high correlation gives reason to claim that the self-assessment items used in this survey as well as in the one in section 5.3, and to a lesser extent in section 5.2, give useful and reasonably valid pictures of student reading difficulties in English.

As discussed in connection with Figure 5.4 concerning the distribution of English and Norwegian self-assessment scores in the survey presented in section 5.3 above, it was discussed whether it would be possible to find a self-assessment score level for English below which respondents can be expected to have serious problems. The IELTS test used here sets a probable pass level of 24 points or above, with those with 16 or less offered little chance of passing the test. The distribution of scores in Figure 5.7 shows that six of the seven who score below 20 on the IELTS test also score 4.0 or below on *Enindex*. However, a cut-off point to 4.0 should be treated with some caution because, as can be seen in Figure 5.7, some of respondents in this sample had low self-assessment scores for English despite acceptable IELTS scores. Nevertheless, it should be possible to say that a self-assessment score of 4.0 or below is a strong indication of serious reading problems. For the study presented in section 5.3 this means that 185 (32%) of the 578 respondents fall below this level, compared to 30% in this sample.

**Reading in Norwegian compared to in English**

As in sections 5.2 and 5.3 above, reading difficulties in English are here investigated by comparing how students find reading in English compared to in Norwegian. Since test scores for Norwegian are not available, the mean scores for the self-assessment indices *Enindex* and *Noindex* are compared in Table 5.15 below.

Table 5.15. Mean scores for *Enindex* and *Noindex* indices. The results are on a scale from 1 = impossible to understand to 7 = no difficulties. N= 53.

| | *Noindex* | *Enindex* |
|---|---|---|
| N | 53 | 53 |
| MEAN $\overline{X}$ | 5.8 | 4.7 |
| STANDARD DEVIATION (SD) | 0.6 | 1.0 |

As can be seen in Table 5.15, for *Enindex* $\overline{x}$ = 4.7, clearly below $\overline{x}$ = 5.8 for *Noindex*. Furthermore, as can be seen in Figure 5.8 the scores for *Noindex* are skewed to the right around a median value of 6.0 while for *Enindex* they are somewhat more evenly distributed with many below a median value of 5.0.

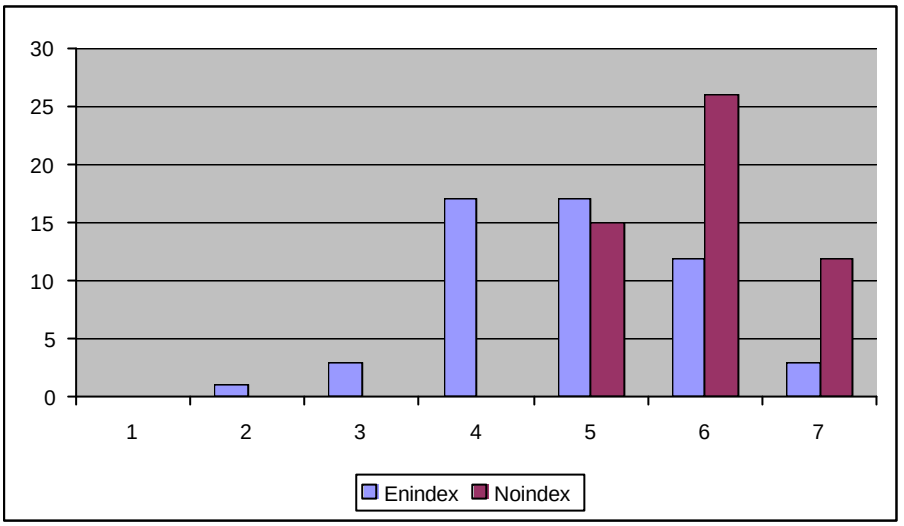



Figure 5.8. Distribution of English and Norwegian self-assessment scores for reading proficiency from the *Noindex* and *Enindex* additive indices. N= 53. The scale is from 1 (impossible to understand) to 7 (no difficulties). For display purposes results are recoded, values from 0 to 1.49 as 1, from 1.5 to 2.49 as 2, etc.

Despite the high IELTS scores, the distribution between languages is not that dissimilar to those in the sample in the survey presented in section 5.3 (see Figure 5.3). The difference between the scores in the two languages for the individual respondents is presented in Table 5.16 below.

Table 5.16. Distribution of scores for reading in Norwegian (*Noindex*) and in English (*Enindex*). Values below 0 indicate that respondents find reading English easier than in Norwegian, above 0 that it is more difficult than in Norwegian. For display purposes results have been recoded, values from the lowest to -3.49 being counted as -3, from -2.5 to -1.49 as -2, etc.

| Difference in scores for reading in Norwegian and English | Respondents | Percentage |
|---|---|---|
| -3 | 0 | 0 |
| -2 | 0 | 0 |
| -1 | 3 | 6 |
| 0 | 7 | 13 |
| 1 | 28 | 53 |
| 2 | 12 | 27 |
| 3 | 2 | 4 |
| 4 | 1 | 2 |
| 5 | 0 | 0 |
| Total | 53 | 100 |

As displayed in Table 5.16, only 10 respondents (19%), have scores that are the same for both languages, or scores that indicate that they find reading English easier. Of the remainder 28 (53%) have a gap of one point in favor of Norwegian being easier, for the remaining 15 (28%) the gap is two points or more. Language deficiencies would be the most probable explanation.

**Areas of reading difficulty**

In Figure 5.3 and Table 5.8 above, the types of problems students experience reading English compared to Norwegian are displayed. Like Table 5.8 above, Table 5.17 displays the mean scores for the questionnaire items on different areas of reading difficulty, reading speed (34 and 40), unknown words (35 and 41), difficult sentences (36 and 42), textual coherence (37 and 43), textual density (38 and 44) and content understanding (39 and 45). All use seven point Likert sales, and are the same items used in the additive indices measuring Norwegian and English reading proficiency. The one respondent who does not have Norwegian as a first language has been excluded from the calculations.

Table 5.17. Comparison of reading difficulties between English and Norwegian. Mean scores for indices based upon items 34 to 39 for Norwegian and the equivalent items for English, 40 to 45. N=52.

| Items, on seven point Likert scales from 1 (lowest) score to 7 (highest) | Norwegian texts (items 34 to 39) Mean scores | English texts (items 40 to 45) Mean scores |
|---|---|---|
| How quickly do you read the texts on your reading lists? | 5.6 | 4.7 |
| Indicate on the scale from 1 to 7 how many words you do not understand in the texts on your reading lists. | 6.1 | 4.6 |
| Indicate on the scale from 1 to 7 to which extent you find the sentences in the texts difficult to understand. | 6.0 | 4.8 |
| Indicate on the scale from 1 to 7 to which extent you find the texts coherent when reading. | 5.9 | 4.8 |
| Indicate on the scale from 1 to 7 to which degree information in the texts is so densely presented that it hinders your understanding of the contents. | 5.3 | 4.5 |
| Indicate on the scale from 1 to 7 to which extent you find the contents of the texts understandable. | 6.0 | 4.8 |

Although these mean scores must of course be interpreted with caution, they reflect those displayed in Table 5.8 above. Likewise, as displayed in Figure 5.7 and Tables 5.16 and 5.17 above, for both samples the mean scores for reading in English are

lower overall than for Norwegian. In this sample, however, slow reading speed is not the main problem for English, the dense presentation of information is, followed by difficulties with unfamiliar words. Whether these differences are significant, given the small sample, has not been calculated. What does remain is that although slow reading speed and difficulties with dense texts in both languages can also be indicative of reading problems in general, the overall differences between English and Norwegian is indicative of lower proficiency in English than Norwegian.

Whether reading proficiency in Norwegian and English covary, that is to say whether a respondent who reads well in Norwegian also reads well in English was investigated in section 5.3 above. Calculations gave a bivariate correlation between reading in Norwegian and in English (as measured by *Noindex* and *Enindex*) of r=.43, p<.01, N= 528. For this sample there is a comparable correlation, r=.46, p<.01, N= 52. The respondent who did not have Norwegian as an L1 has been excluded.

One possible reason why this correlation is not higher is the number of respondents that apparently fall below the Linguistic Threshold Level (see 3.3). These respondents will manifest high scores for reading in Norwegian in contrast to low scores for English. In the scatter-plot in Figure 5.9 below, the respondents in this category can be found in the upper, left-hand quadrant of the plot. Those who read well in both languages can be found in the upper, right hand quadrant, while the small number who read poorly in both languages are to be found in the bottom left hand quadrant.

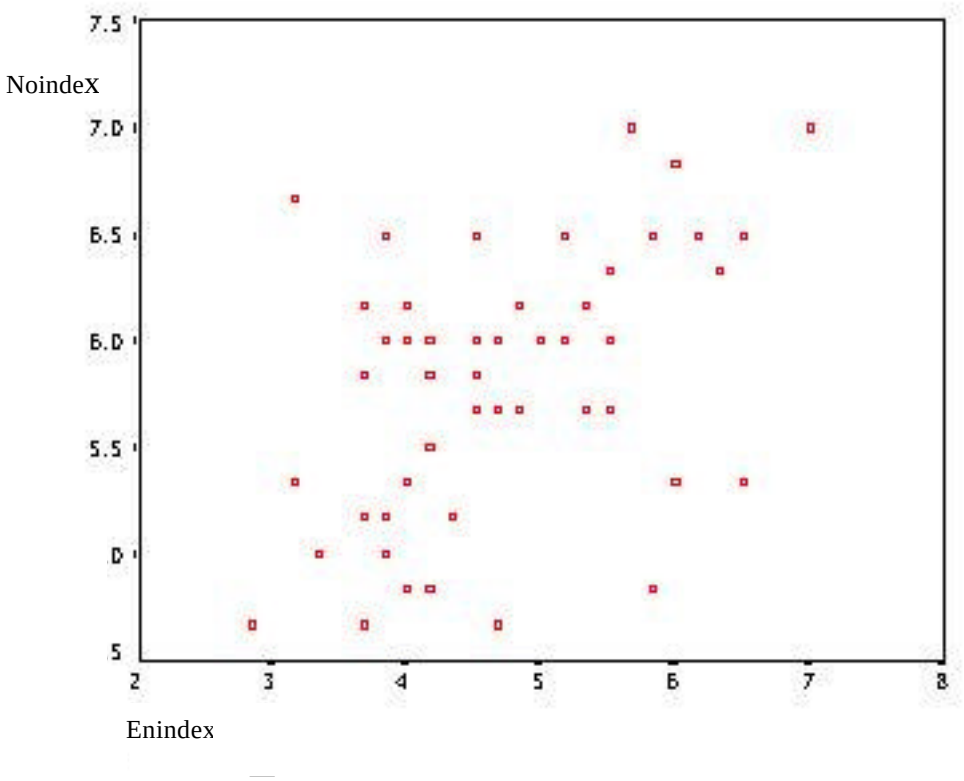



Figure 5.9. Scatter-plot showing the distribution of scores for *Enindex* and *Noindex*. One indicates severe reading difficulties, seven no problems. The one respondent who does not have Norwegian as L1 is excluded. N= 52.

To sum up, the distribution of scores for reading proficiency between languages for this sample as displayed in 5.9, are roughly comparable to those found in Figure 5.5, the scatter plot displaying the distribution for the sample in the survey presented in section 5.3. In both a number of respondents have markedly greater problems reading in English in spite of high proficiency in Norwegian, and this is most probably due to poor English proficiency, to the extent that some fall below the Linguistic Threshold Level.

**Study experience and reading proficiency**

To what extent study experience covaries with reading proficiency was investigated in the studies presented in sections 5.2 and 5.3. In this sample the number of credits completed varied from 8 (15%) with no Norwegian credits, 3 (6%) with 2 to 10, 8 (15%) with 11 to 20, 4 (7%) with 30-40, and 17 (32%) with 40 or more credits. Compared to the sample in the previous section 5.3, there were slightly fewer respondents without credits in this sample, 15% compared to 23% in 5.2, as well as fewer with long study experience, 32% with 40 credits or more compared to 45%. Of

course, the low number of respondents in this sample means it cannot be broken down into smaller groups for more detailed analysis.

Correlations for completed credits (29) with *Enindex*, *Noindex*, and IELTS scores are presented in Table 5.18 below. As can be seen there are no meaningful or significant correlations in this sample.

Table 5.18. Study experience correlated with reading proficiency. Bivariate correlations between completed credits (item 29) and self-assessed Norwegian and English reading proficiency scores as well as IELTS test scores. N= 53.

| Completed credits (independent variable, v029) | *Noindex* | *Enindex* | IELTS |
|---|---|---|---|
| Bivariate correlations (r) | -.13 | -.14 | -.01 |
| Significance (p) | .36 | .33 | .95 |
| N | 53 | 53 | 53 |

These inconclusive results, which reflect those in section 5.2, go to show that study experience does not necessarily covary with improved reading proficiency. On the other hand, as indicated by the differences between languages and faculties revealed in 5.3, it is possible that this might vary somewhat according to language and subject.

**Reading habits and media consumption**

One of the expectations in this study was that exposure to English through extracurricular reading would covary with reading proficiency. In this was one of the results in the survey presented in section 5.3 above. This is also investigated in this section, starting with the number of English books read by respondents (item 58). These number are displayed in Table 5.19 below.

Table 5.19. Number of English books read. N= 53.

| English books read | Frequency | Percent |
|---|---|---|
| None | 1 | 2 |
| 1-5 | 9 | 17 |
| 6-10 | 8 | 15 |
| 11-15 | 9 | 17 |
| 16-20 | 8 | 15 |
| 21-50 | 9 | 17 |
| 51 or more | 9 | 17 |
| Total | 53 | 100 |

The percentages are quite similar to those in the previous sample (see Table 5.9), and many of the students have read fairly extensively. Furthermore, bivariate correlation analysis again shows that this variable has a high positive correlation against the IELTS scores. The same is the case for the reading of periodicals and the Internet. The correlations are displayed in Table 5.20 below.

Table 5.20. Extracurricular reading against IELTS (*alltex*) scores, bivariate correlations. N= 53.

| IELTS scores (Alltex) as independent variable | Book reading (058) | Periodical reading (061) | Internet reading (062) |
|---|---|---|---|
| Bivariate correlations (r) | .58 | .38 | .47 |
| Significance (p) | .01 | .01 | .01 |
| N | 53 | 53 | 53 |

Multiple regression analysis with IELTS scores as dependent variable and these three (58, 61, 62) as independent variables give an explained variance of $R^2 = .40$. Again, this reflects the results in section 5.2, with $R^2 = .29$.

**Unfamiliar vocabulary and reading proficiency**

As mentioned in Chapter 3, (see 3.3 & 3.5.2), unfamiliar vocabulary is a key challenge when reading a foreign language. Consequently, the efficacy of the various ways respondents deal with this difficulty is an important issue. As can be seen in Table 5.21 below, answers to the items on how the respondents handled unfamiliar items of vocabulary (items 51 to 57) revealed roughly the same trends as in the survey in section 5.3. However, in this sample hardly any correlations are statistically significant, most probably due to the low N and low correlations. They are, nevertheless, presented for reasons of comparison.

| Independent variables | Bivariate correlations (r) with IELTS scores as dependent variable | Bivariate correlations (r) with self-assessment scores as dependent variable |
|---|---|---|
| Guess meaning of word using subject knowledge (052) | .20 | .39 |
| Guess meaning of word using context (053) | .22 | .41 |
| Ask lecturer (054) | -.17 | -.03 |
| Ask other students (055) | .05 | .07 |
| I just keep on reading (056) | .01 | .20 |
| Dictionary use (057) | -.26 | -.29 |
| I give up reading (057) | -.21 | -.17 |

Table 5.21. Bivariate correlations on items 51 to 57 on the handling of unknown words. This sample, section 5.4 This sample, section 5.4

Again, it is interesting to note the negative correlations for dictionary use, which can be found in both samples. These are, perhaps, an indication of respondents who consult dictionaries extensively being among the weaker readers. Alternatively, it may be due to consulting the dictionary disrupts the reading process, at least if it is consulted excessively. Next, the correlations for compensatory strategies of guessing meaning on the basis of subject matter knowledge (item 52), and guessing from context (item 53) are positive. A possible explanation for why the correlations with self-assessment are higher than with the IELTS scores might be that many of those who continue to higher education often think they are better than they actually are. Like in the survey presented in section 5.3, a negative correlation for giving up on reading when faced with too many unknown words was also found here. For this sample, however, it was markedly lower, either r=-.21 with the IELTS scores or r=-.17 with self-assessment compared to the r= -.50 in the survey presented in section 5.3.

Last, multiple regression analysis gave an explained variance for these variables on the handling of unknown words that was constant across both samples. In this sample $R^2$ = .23 with IELTS scores as dependent variable, while for self-assessment it is $R^2$ = .29. These can be compared to $R^2$ = .30 in section 5.3, where self-assessment scores are the dependent variable.

**Upper secondary EFL instruction and reading proficiency**

A key aim of the present study was to ascertain whether Norwegian upper secondary EFL instruction develops the reading skills required to master English textbooks. As in the surveys presented in sections 5.2 and 5.3 above, this was examined by testing whether completing the upper secondary Advanced English Course does or does not covary with English reading proficiency. The assumption here is that completing this large and time-consuming course should correlate positively with IELTS scores.

In this sample, 21 (40%) of 53 respondents had completed the Advanced English Course, compared to 21% and 36% respectively in the previous surveys presented in sections 5.2 and 5.3. Unlike in sections 5.2 and 5.3, however, the dummy variable for the Advanced English Course constructed from item 23 had a positive correlation of r=. 30, p<.05, N= 53 with the IELTS test scores. Using *Enindex* as a dependent variable also gave a comparable positive correlation of r=.27, p<.05, N=53. Of course this could be due to indirect effects, such as having completed the Advanced English Course leading some to study English in higher education, or to additional reading. With regard to the former, when the nine students who had studied English in higher education (item 030) were excluded from the calculations, this only resulted in a marginally lower correlation, r=.29, p<.06, N= 44 with IELTS scores. With regard to reading, it seemed that students with the Advanced English Course had read somewhat fewer English novels than the others in this sample. For this sample it can therefore be concluded that completing the Advanced English Course covaries positively with English reading proficiency (see Chapter 6, section 6.1.8 further discussion).

**Unfamiliar vocabulary**

The importance of vocabulary knowledge for reading proficiency was discussed in section 3.3 and subsection 3.5.2 above. With this in mind, respondents were asked to underline unfamiliar words when reading the first text, A, and the last text, C in the IELTS Academic Reading Module (Appendix 4). Extra time was allotted to compensate for slower reading speed. When tallying, a single underlined word counted as one instance. If several words were underlined, such as compound nouns, expressions, or lexical phrases, these were counted as single instances. If an underlined passage comprised recognizably distinct items these were counted separately. However, if entire sentences were underlined these were not counted.

Given the number of answers it would seem that the respondents were fairly conscientious in underlining in both texts A and C, though one respondent only did so for the first text and not for the second. The mean value for unfamiliar words in Text A was $\overline{X} = 9.1$, while the text had 945 words. Two thirds of the respondents answered at or below the mean. Likewise, Text C had $\overline{X} = 4.5$ out of a total of 990 words, also with about two thirds of the respondents on or below the mean. The highest number of unknown words for text A was 52, for text C it was 42.

Table 5.22. The number of words per text, the average unknown words underlined by the respondents in Texts A and C, and the highest and lowest number of unknown words indicated.

| Text | Total number of words in the text | N | Mean value $\overline{X}$, unknown words underlined | Standard deviation (SD) | Highest and lowest number of unknown words underlined |
|---|---|---|---|---|---|
| A | 945 | 53 | 9.1 | 9.7 | 0 - 52 |
| C | 990 | 52 | 4.5 | 6.7 | 0 - 42 |

These two items could be combined into an additive index for unknown vocabulary. Reliability according to the Cronbach-Alpha test is high, $\propto = .8$ for two items. An additional check was run on how this index correlated against the self-assessment item (item 041) for reading difficulties caused by unfamiliar English words. This gave a clear negative correlation, r= -.51, p<.01, N=52. The negative correlation here is to be expected, showing that the higher the number of unfamiliar words indicated, the lower the understanding on a scale from 1 (impossible to understand) to 7 (no difficulties) will be. Likewise, a negative correlation would be expected against IELTS scores (*alltex*) when seeing how difficulties with unfamiliar words affected test scores. This is also the case, r= -.47, p<.01, N=52.

To ascertain whether reading habits affected student vocabulary, the item for the number of English books read (58) was correlated with the unfamiliar words for text A. Again this resulted in a clear, negative correlation, r= -.46, (p<.01, N=52), meaning that the more extensively the respondent had read, the fewer unfamiliar words they noted. There was also a high negative correlation for reading on the Internet (061), r= -.43,p< .01, N= 52. In comparison, completing the Advanced English Course has a low and non-significant correlation, r= -.19, p =.16, N= 52.

These results should be interpreted with caution, and should in any case be tested in a follow-up survey with improved items. Nevertheless, the results are an indication that many respondents have problems reading due to problems with unfamiliar words (see Chapter 6. section 6.1.4).

**The importance of attitude**

Closer analysis of the respondents highlighted the covariation between the respondents' interest – or lack of interest in the school subject English (item 25), and grades in English (item 24) with test scores. For instance, while the average English grade on a scale from one to six for the 53 respondents is 4.4, for the eight scoring 17 points or below in this sample it is 3.4.[44] However, while the level of interest for the school subject English, on a scale from 1 (very uninterested) to 7 (highly interested) for the sample as a whole is $\overline{X} = 4.5$, for the eight low scorers it is $\overline{X} = 2.8$.

Not unexpectedly, for the sample as a whole these independent variables also have high positive correlations against the IELTS scores. For grade (item 24) it is high indeed, r= .72, p<.01, N=53. For interest (item 25) it is somewhat lower, r=.59, p<.01, N=53. This can hardly come as a surprise, and similar correlations between test scores, grades and indicators of motivation for or interest in the subject in question have been found in other surveys (Lie, Kjærnsli, Roe, & Turmoe, 2001).[45]

A closer look at these eight low scoring respondents reveals a number of factors in common. First of all, only two have the Advanced English Course, although one of these was a comparable course from the late 1960s. Three of the others have the minimum, first year Foundation Course and three of the respondents the 3 lessons-per-week elective General English course. Four of the eight had specialized in other foreign languages, two in advanced French and two in advanced German. While two respondents had chosen subjects such as Math and Chemistry, the majority had studied Social Studies, Economics or Business Economics. Apart from the respondent with an upper secondary degree from the late 1960s who had worked in a country

[44] This is slightly below the average grade of 3.4 in (N=5052, S.D = 1.1) for the national English Foundation course (Vg 1200) examinations in the spring of 2002, retrieved December 22, 2003, from The Directorate for Primary and Secondary Education website: http://www.ls.no/utdanningsstatistikk/karstat-vgo/nvb5.asp.

[45] See Chapter 6, subsection 6.7.1 on the influence of motivation on reading scores in Norwegian for Norwegian 16-year-olds, and Chapter 9, points 9.3 and 9.4 for Mathematics and Natural Science.

where English was one of the dominant languages, the other 7 had no special contact with English or English-speaking areas. As a group they also tended to read less than the others, four answering only 1-5 novels, one 6-10, three 11 to 15. Last, these respondents as a group left many of the IELTS items unanswered. All in all, it would seem that the respondents scoring 17 or below on the IELTS test not only had lower motivation for English than the others, they also had lower grades, read less, read more slowly, and avoided in-depth studies of English. Unfortunately, there are no means of ascertaining how well these respondents are doing in their studies compared to the others.

In other words, in this survey many of those who do poorly on the IELTS test in the present study were characterized by a negative attitude towards, or a general lack of interest in English as a school subject. This will, of course, have to be checked with other and larger samples before any claims about possible trends can be made (see Chapter 6, subsection 6.1.9 below).

### 5.4.4. Summary

The main goal of this study was to validate the self-assessment items used to measure English reading proficiency in section 5.3 using an internationally recognized test, in this case the IELTS Academic Reading Module. A fairly high correlation of r=.72 indicates that the self-assessment items give a useful picture of English reading proficiency in the case of student respondents with experience reading English textbooks.

A second goal was to use the IELTS test to see at which self-assessment score it would be possible to say that respondents have inadequate reading proficiency in English. In this sample it appeared that many, but not all of those who had an average self-assessment score of 4.0 or below (on a scale from 1 to 7) scored below, often well below the suggested pass level of 24 correct answers. This could in turn be related to the scores of the respondents presented in section 5.3 above.

With regard to the results, the volunteer respondents in this sample had high scores on the IELTS reading test, 80% scoring 24 points or more, half of these better than 34 points. Of the 20% scoring below 24 points, half, about 9% scored below 17, a level where IELTS gives little hope of passing the examinations. Furthermore, a number of respondents seemed to have problems with reading speed, as indicated by

the number of unanswered IELTS items (see Table 5.14). This means that the data from this sample of highly proficient respondents needs to be interpreted with caution, although the trends found to a large extent reflect those discussed in section 5.3. These can be summed up as follows:

First, most respondents clearly find reading in English more difficult than Norwegian. While some obviously had difficulties reading in both languages, for some the gap between scores in Norwegian and English was large enough to be indicative of language difficulties. As in the surveys presented in sections 5.2 and 5.3 the main source of difficulty turned out to be unfamiliar words.

Next, of the independent variables influencing English reading proficiency, study experience did not covary with reading proficiency as in the surveys presented in sections 5.2 and 5.3. In contrast, extracurricular reading, of books, periodicals and/or the Internet did. Multiple regression analysis showed these to have an explained variance of $R^2$= .29, roughly comparable to the results reported in sections 5.2 and 5.3. Unlike in the previous sections, however, in this sample completing upper secondary Advanced English Course had a positive correlation against the IELTS reading scores, r=. 30, p<.05, N= 53.

Furthermore, it appeared that the more respondents had read, the fewer unknown words they found on the IELTS reading texts. In addition, strategies for handling unfamiliar vocabulary also turned out to be important for IELTS scores, in particular the ability to guess word meaning from context or knowledge of the subject. This was also the case for self-assessment scores in the other samples where self-assessment indices were used as dependent variables.

Last, in this study I examined what characterized the eight respondents scoring 17 or below on the IELTS test. A very tentative conclusion would be that these as a group had a low degree of interest in English, somewhat lower grades, and a tendency to avoid English as an upper secondary subject beyond the minimum requirements. They also read less than the other respondents.

## *5.5. ENGLISH READING PROFICIENCY AT THE UPPER SECONDARY SCHOOL LEVEL: A SECOND PILOT STUDY*

### 5.5.1. Introduction

This second pilot survey in this study, with respondents from the General Studies branch of upper secondary school, took place late in the fall term of 2001. Like the survey discussed in section 5.4, it combines a questionnaire (Appendix 3) with an IELTS Academic Reading Module test (Appendix 4). It had four aims. The first was to troubleshoot the revised questionnaire (Appendix 3). A revision had been necessary because the questionnaire used in the surveys presented in sections 5.3 and 5.4 above

(Appendix 2) had to be adapted for upper secondary school respondents. Although the overall changes from the previous version were minor, a trial was necessary. The second and main aim for the pilot, however, was the need to test whether the IELTS reading test would function for upper secondary students. This is because Norwegian students are unfamiliar with this kind of test. Checking whether the test instructions and the two-lesson (90 minutes) time schedule functioned was also important. Third, the pilot was to evaluate whether asking respondents to underline unknown words in the three IELTS test would provide useful information. Last, this survey was to gain a first impression of the English reading proficiency of upper secondary students in the General Studies branch.

Despite a small sample with only 21 respondents, the data from this pilot survey has been included in this study because it offers a first look at how a mixed Norwegian upper secondary class of students from the General Studies branch score on the IELTS Academic Reading Module. It also allows for comparison with the larger survey presented in section 5.6 below. Statistical analysis is limited to presenting actual scores, comparing means and distributions.

### 5.5.2. Sample and method

**Sample**

The respondents in this pilot survey were from a well-established, Norwegian upper secondary school with classes in the General Studies branch only.[46] At the second and third-year levels General Studies students have a number of compulsory subjects in which the class is taught as a unit. These subjects are Norwegian, Social Studies, and Religious Education. Those remaining are elective courses, such as Mathematics, English or Advanced Social Studies, with groups comprising students from several different classes who are stratified according to interest and, to a certain extent,

[46] The name of the school is withheld since the detailed analysis of a single class might violate the anonymity of both staff and pupils. The test was carried out with the permission of the principal.

ability. To assure a mixed group the survey had to be carried out during lessons in the general, compulsory subjects. Unfortunately, the class I was allowed to "borrow" during general, compulsory subjects for two consecutive lessons was a second year (VKI), not a third year (VK2), senior level class.

The teachers characterized this class as 'positive, and motivated', and as somewhat above average compared to other classes. It had 23 students, out of whom 21, 9 boys and 12 girls, took part in the test. With regard to study specialization, answers to items 9 to 19 about the choice of third-year elective subjects, might not be quite reliable. This is because it is possible to change or leave a subject between the second and third year of study. Therefore, the answers might reflect what these second year students planned on doing at the time of the survey, not necessarily what they actually did. Nevertheless, seven respondents (33%) indicated they were attending the advanced course in Mathematics and ten (48%) in Advanced Social Studies. This gives a useful impression of distribution with regard to specialization between subject areas. For the English courses the students did not distinguish between the three or five lessons-per-week second year courses when filling in the questionnaire. In any case, 16 (76%) were attending an English course at the time of the survey, either the General English or the English 1 Course (see Table 2.2). Of course, all had attended the English Foundation Course the previous school year. It should also be mentioned that 20 (95%) of the 21 students indicated that they intended to go on to higher education.

**Method**

The revised questionnaire (Appendix 3) retained most of the items from the university level questionnaire (Appendix 2). However, the phrasing of a number of items in the revised questionnaire was changed to fit in with the upper secondary level. An example here would be the item on course of study (item 3). New items were also added, e.g. on home background, such as English use at home (item 8), on background in English (items 26 to 31), and on whether and where the respondents intended to go on to higher education (items 20, 21, 22). There were also new items on the number of English and Norwegian books the respondents had at home (items 37 and 47), and a new item on how often they read English Internet texts (items 35). Furthermore, two new self-assessment items on reading difficulty in English (item 38) and Norwegian (item 48), based upon the Common European Framework reference

level scales for reading, levels A1 to C2, were translated into Norwegian and included (Council of Europe, 2001, pp. 26-27).

The IELTS test used was identical to the one used in the validation study presented in section 5.4. I corrected the IELTS tests in accordance with IELTS instructions. As in 5.4 an exception was made for test item 30 (see Appendix 4) where IELTS specified the use of the preposition *on* in the expression "wind on the film" for a correct answer. Here, "wind the film," despite the missing preposition, was also tallied as an acceptable answer.

As agreed with the teachers the test took place during consecutive Norwegian and Social Studies lessons. I "borrowed" the class and administered and monitored the test myself. Students were allowed a ten-minute break between lessons, and during this break and afterwards many asked about studying at the university. All students present volunteered for the test and showed interest in it.

All in all, the test and the questionnaire caused few problems. For the IELTS test the main source of difficulty for three or four of the respondents involved three where respondents were to fill in key words in a flow chart on the basis of information in the second text in the module (Appendix 4, items 23, 24, and 25). The respondents in question had difficulties understanding both the instructions and the task and asked for help. However, the majority of the class did not do so. In fact, three students completed the questionnaire and test with mostly correct answers in only 75 minutes. Others were not able to complete it in the time available.

With regard to the questionnaire, an oversight lead to the researcher leaving out some of the self-assessment items on reading difficulties used in 5.3 and 5.4. These were items 39 to 44 for English, and 49 to 54 for Norwegian (see Appendix 3). They were, of course, included in the follow-up. To avoid including an extra questionnaire with minimal differences to the one used for the survey presented in Section 5.6 below the version of the questionnaire used for this pilot has not been included in the Appendix. Instead, only the revised and final version of the questionnaire, Appendix 3, is included.

### 5.5.3. Results

The mean IELTS score for this sample is displayed in Table 5.23 below.

Table 5.23. Mean IELTS scores. Maximum score is 38. N=21.

| | IELTS scores |
|---|---|
| N | 21 |
| Mean $\overline{X}$ | 20 |
| Standard Deviation (SD) | 7 |

The test score distribution for the 21 respondents is displayed in Figure 5.10 below.

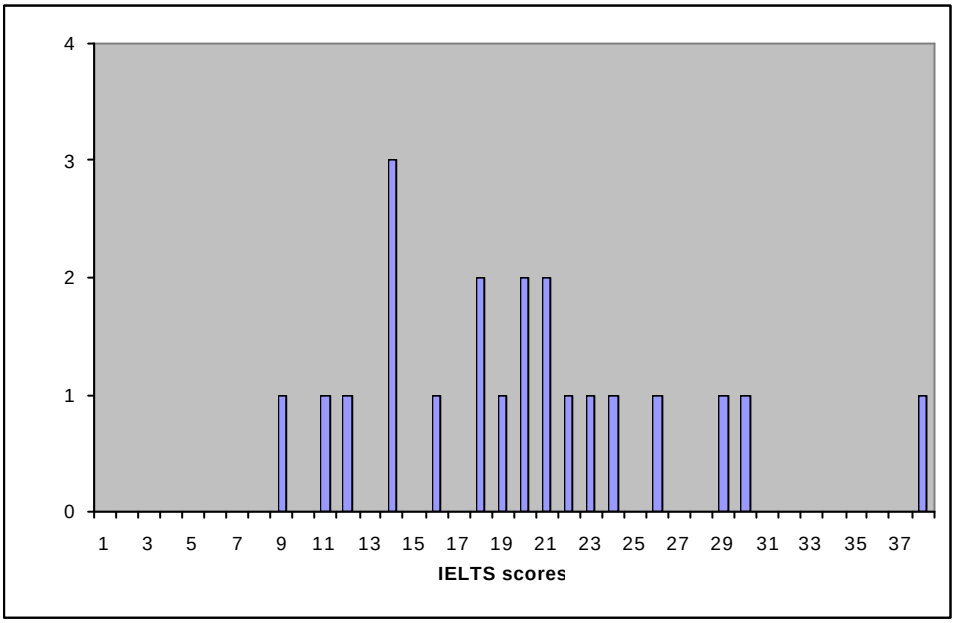



Figure 5.10. IELTS Academic Reading Module scores. The maximum score is 38, $\overline{X}$ =20, SD= 7.0, N= 21.

As mentioned in subsection 4.3.3, for scores between 0 and 16 test takers are given little chance of passing the text. The intermediate level is from 17 to 23. Last, a score of 24 or better out of a maximum of 38 points is likely to give "an acceptable score." In this test seven out of 21 (33%) of the respondents managed from nine to 16 points, ten (50%) from 18 to 24. Only four (19%) of the respondents achieved what IELTS considers a passing score.

There is little reason to believe that sloppiness or low motivation were to blame for these low scores. During the test it was easy to see that the students were doing their best to answer the test. Closer examination of the IELTS answer sheets

showed that few, only three in fact, managed to answer all or most of the questions (see Appendix 4). The majority either skipped questions they could not answer or ran out of time after "bogging down" somewhere between items 16 and 28, that is to say at end of text B or beginning of text C. While most did well on text A, it was apparent from the many mistakes made when answering text B that this somewhat dense business text slowed many down. Few respondents had the presence of mind to jump to easier items in text C. While three respondents needed less than the allotted time, the majority read and worked fairly slowly and did not finish all the test items. It cannot be discounted that the respondents were slowed down by being asked to underline unfamiliar words in the three IELTS texts. On the other hand, they had considerably more time than IELTS' 60 minutes to answer the test. This extra time should, at least partially, have compensated for an unfamiliar test format and having to underline unfamiliar words.

As mentioned in subsection 4.3.3 above, being able to complete the test in the allotted time is part of the IELTS test. It would therefore seem that the low scores are due to language and reading difficulties, in particular with the dense and demanding Text B, in addition to the tendency to read and work very slowly. The mean score for the number of unanswered items in Table 5.24 below is also higher for this group compared to the scores for the university and college students in Table 5.14 above.

Table 5.24. Breakdown of the IELTS scores. The mean values are for correct, wrongly answered and unanswered items as separate categories, and for wrong and unanswered questions as one category as well as minimum and maximum scores. The maximum score is 38.

| | Correct answers | Wrong answer | Unanswered | Wrong and unanswered |
|---|---|---|---|---|
| N | 21 | 21 | 21 | 21 |
| Mean ($\overline{X}$) | 20 | 7 | 11 | 18 |
| Std. Deviation (SD) | 6.7 | 3.9 | 6.4 | 6.5 |
| Minimum and maximum score | 10-36 | 1-15 | 0-24 | 3-28 |

The many unanswered items with this sample go to indicate that students transferring the slow and careful reading typical of many EFL classrooms to the reading of the test texts (see 3.6.4) might be as much of a problem as poor language proficiency. What is also clear at this point is that their mean score, $\overline{x}$ = 20 on the IELTS test, is a rather

low one. Further analysis, however, will have to await the larger sample in section 5.6.

**Reading in Norwegian compared to English**

It is possible that many respondents with low IELTS scores were poor readers of Norwegian as well as English. As mentioned, the self-assessment items used in 5.3 and 5.4 to construct additive indices in English and Norwegian were left out in the questionnaire used with this sample.[47] This means that these could not be used for comparing proficiency in the two languages as in the surveys above. Due to concern about the construct validity of these additive indices in this sample I, as mentioned above, included alternative self-assessment items in the questionnaire based on the Common European Framework. In the following these are used to compare the proficiency in the two languages (item 38 for English, 48 for Norwegian).

Table 5.25. Comparison of scores for reading proficiency in English and Norwegian using Common European Framework rating scales. A1 is the lowest level and C2 the highest.

| Level | Self-assessment grid, levels of reading | Respondents English | Respondents Norwegian |
|---|---|---|---|
| A1 | I can understand familiar names, words and very simple sentences, for instance on notices and posters or in catalogues | | |
| A2 | I can read very short, simple texts. I can find specific, predictable information in simple, everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple letters. | | |
| B1 | I can understand texts that consist mainly of high frequency everyday or job related language.<br>I can understand the description of events, feelings and wishes in personal letters. | 3 (14%) | |
| B2 | I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.<br>I can understand contemporary literary prose. | 16 (76%) | 6 (29%) |
| C1 | I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialized articles and longer technical instructions, even when they do not relate to my field. | 2 (10%) | 7 (33%) |
| C2 | I can read with ease virtually all forms of the written language, including abstract, structurally or linguistically complex texts such as manuals, specialized articles and literary works. | | 8 (38%) |

[47] As discussed in 4.5.2, the construct validity of these indices is questionable, for English in particular since the respondents have limited experience upon which to base their self-assessment. This should also affect the construct validity of the Common European Framework scales, in particular with regard to English.

| | | |
|---|---|---|
| Total | 21 (100%) | 21 (100%) |

As can be seen in Table 5.25, 16 respondents (76%) indicated a level of B2 for English compared to the 15 (71%) answering C1 or C2 in for Norwegian. This shows that most of the students rate themselves as reasonably good readers of Norwegian, the exception being the 6 (29%) who rate themselves at the B2 level in Norwegian, which does seem rather low for the L1. These six might therefore be poor readers in both languages, but are not numerous enough to account for the low IELTS scores. Furthermore, that the respondents rate their reading skills in English lower than for Norwegian was also the case in the surveys presented above, see Figures 5.1, 5.3, and 5.7.

**Reading habits and media consumption**

The amount of reading in English proved an important variable in the previous surveys, and in item 32 the students were asked about their reading habits in English. The results are displayed in Table 5.26 below.

Table 5.26. English novels read. N= 21.

| Number of novels read | Respondents |
|---|---|
| 0 | 1 (5%) |
| 1-5 | 13 (62%) |
| 6-10 | 5 (24%) |
| 11-15 | 2 (9%) |
| | Total 21 (100%) |

The majority of the respondents answer that they had read 1 to 5 English novels. This reflects the requirements set in EFL syllabuses in lower and upper secondary (see Table 2.3). What was more unexpected was that selecting those students who had read beyond this minimum, 6-10 books or more, did not give a higher IELTS test score. In contrast, selecting for frequent reading of English texts on the Internet gave higher scores (item 35), and these respondents included three of the four students who scored higher than 24. Since a small group of 21 respondents precludes more detailed analysis of variables such as reading habits, English media consumption, and English course selection, further analysis will require a larger sample, such as in the survey presented in section 5.6.

**Unfamiliar vocabulary**

As mentioned above, unfamiliar vocabulary is considered one of the key difficulties for reading in a foreign language. To see to what extent unfamiliar words are a problem at the upper secondary level, the respondents were asked to underline words they did not understand in the three texts in the IELTS test. As mentioned above, extra time was allotted to compensate for a possible reduction in reading speed.

The respondents seemed fairly conscientious in underlining words they could not understand in all three texts. In Text A, for instance, out of a text comprising about 945 words two respondents underlined none at all, seven underlined from one to ten, eight between 11 and 20, and four between 21 and 32. To give an idea of which words were underlined, those underlined by the respondent with the highest number of underlined words in Text A, 32 in all, are listed below:

> Astounded, occurred, boundary, stir, B.C., A.D., spasmodic, dormant, alerted, renewed, tremors, ensued, timber-cutters, slopes, lodge owners, avalanche, inescapable, torrents, debris, vents, cracks, decompression, shattered, firs, depth, amass, vast, droplets, sulphuric acid, quantity, negligible

It is interesting to note that though there are some verbs and adjectives in this list, many or most of the items are nouns related to volcanic eruptions. Many of the same words were underlined by the other respondents.

In Table 5.27 below the number of words in each text, the average number of underlined words, and the maximum number of unknown words underlined are displayed. The words in the text, and those underlined by the respondents are rough counts only, including compounds and expressions in addition to numbers, names, and words separated by a space or a slash.

Table 5.27. The number of words per text, the average unknown words underlined by the respondents, and the lowest and highest number of unknown words indicated. N= 21.

| Text | Total number of words in the text | Mean value $\overline{X}$, unknown words underlined | Standard deviation (SD) for number of unknown words underlined | Highest and lowest number of unknown words underlined |
|---|---|---|---|---|
| A | 945 | 12.6 | 8.5 | 0 - 32 |

| | | | | |
|---|---|---|---|---|
| B | 751 | 8.6 | 7.8 | 0 - 26 |
| C | 990 | 7.1 | 6.8 | 0 - 20 |

With only 21 respondents there is little point in more detailed statistical analysis. What analysis so far goes to show is that asking the respondents to underline unknown words in the texts might provide useful data and avenues of analysis. Given that several respondents completed their tests with time to spare, I therefore decided to risk asking respondents to underline unknown words in the IELTS texts in the next, more comprehensive survey discussed in section 5.6 below.

Last in this analysis, it should be mentioned that many items, for instance those on how respondents handle unknown words, items 43 to 50 in Appendix 3, have not been analysed in this pilot survey. This is because the low number of respondents precludes meaningful statistical analysis.

### 5.5.4. Summary

This pilot survey had three main aims. First of all, it was to ascertain whether the IELTS Academic Reading Module (Appendix 4) would function with respondents at the upper secondary level. Second, it was to try out the revised questionnaire (Appendix 3). Third, it was to check whether asking respondents to underline unknown words in the three IELTS texts would provide useful information.

To start with, the experience with this pilot survey indicated that the test instructions only needed minor changes, and that the two-lesson (90 minutes) time schedule was a practical solution.

With regard to the IELTS Academic Reading Module, this test functioned well, and provided a disconcerting picture of a class with a mean IELTS score of 20 out of 38 possible, The scores indicate that 33% would have had little or no chance of passing a test designed to check whether students are able to study at an English-speaking university, and an additional 50% would also have had difficulties. In fact, only 19% of the respondents in this sample achieved a score of 24 or better. Closer examination of the test scores, and remembering the respondents' positive attitude towards taking the test indicate that these scores were not due to problems or deficiencies in the IELTS test. Instead, they could be attributed to actual differences in English reading proficiency, and/or to a tendency to read and work so slowly and

carefully with the texts and the test that the respondents ran out of time as, indicated by the unanswered items. The conclusion was that the IELTS test could be used in the follow-up survey.

With regard to the revised questionnaire (Appendix 3), the main change was that self-assessment items asking respondents to assess their reading difficulties in English and Norwegian had been left out by the researcher were re-inserted. The new self-assessment scale of reading proficiency based upon the Council of Europe's Common European Framework was also retained. Apart from this, there was no need to change other items in the questionnaire since the revised items functioned as intended.

The third aim of the pilot survey was to check whether asking respondents to underline unknown words in the three IELTS test would provide useful information, as noted above. Several respondents finished the test and survey in good time and with good results, which argued against this having unduly disrupted the respondents' reading process. When extra time for the test could be allotted, the conclusion was that the promise of additional data and avenues of investigation made it worthwhile to include this in the next survey.

In the study discussed in section 5.6 below, it would be reasonable to expect senior upper secondary students to do better than this sample of second-year students. These would not only be somewhat older and more mature, they would also have had additional instruction in their subjects and in English. If the outcome of the IELTS tests and the other scores found in this pilot survey are repeated in one with a larger sample of senior level students from different schools, there would certainly be reason for worry.

## 5.6. ENGLISH READING PROFICIENCY IN UPPER-SECONDARY SCHOOL: A SEVEN SCHOOL SAMPLE

### 5.6.1. Introduction

In this section I present a survey of 217 senior upper secondary school students from seven schools in different parts of Norway. All are from the General Studies branch. As in the surveys presented in sections 5.4 and 5.5, this survey combines a questionnaire (Appendix 3) with an IELTS Academic Reading Module test (Appendix 4). The main aims are to see whether the student respondents in this sample have difficulties reading English textbooks, the extent of their difficulties, and to identify variables that covary with English reading proficiency. The number of respondents allows for the use of multiple regression analysis in addition to comparing mean scores and testing for bivariate correlations.

Below follows a brief presentation of sample(s) and method. It starts by explaining the division into two sub-samples, those with EFL instruction only, and those who also have had CLIL instruction. In the results subsection the data from these sub-samples are analyzed separately.

### 5.6.2. Sample, sub-samples, and method

This survey, the last in this study, took place during the 2002 spring term. It used a questionnaire (Appendix 3) that was adapted from the one used for university and college respondents in the surveys presented in sections 5.3 and 5.4 (Appendix 2). The questionnaire was tested and further revised on the basis of the pilot survey presented in section 5.5.

The questionnaire itself has 74 items that can be grouped into three categories: dependent variables (self-assessment) measuring English and Norwegian reading

proficiency, independent variables expected to covary with reading comprehension, and independent variables providing information about student background. In the following, items in the questionnaire (see Appendix 3) will be referred to by number. As in the analyses in 5.4 and 5.5 above, the IELTS Academic Reading Module test scores are used as the main dependent variable for reading proficiency.

**Sample and sub-samples**

Ten schools were contacted and asked to take part in this survey. Two were unable to do so and a third declined because they considered their students to be too "weak." The end result was 217 senior (3rd year) students on the General Studies branch from seven upper secondary schools from Sør-Trøndelag, Møre and Romsdal, Hordaland, Vest-Agder, Østfold, and Oppland counties. At the outset the survey was not anonymous, but it was an explicit condition that results from a single school were not to be singled out without permission. Later I decided not to name the schools taking part. The distribution is presented in Table 5.28.

Table 5.28. Schools, students and classes.

| Upper secondary school | Classes/groups per school | Total sample size | EFL sample size | CLIL sample size | Percentage of respondents from this school |
|---|---|---|---|---|---|
| School 1 | 1 | 27 | 27 | | 12% |
| School 2 | 1 | 23 | 17 | 6 | 11% |
| School 3 | 2 | 31 | 18 | 13 | 14% |
| School 4 | 2 | 36 | 20 | 16 | 17% |
| School 5 | 2 | 38 | 38 | | 18% |
| School 6 | 1 | 21 | 17 | 4 | 10% |
| School 7 | 2 | 41 | 41 | | 19% |
| Total | 11 | 217 | 178 | 39 | 100% |

As discussed in subsection 4.6.2, the composition of this sample was the outcome of my contacting friends and acquaintances at the schools in question and asking them to help out with the survey. If possible, I asked them to select one or two mixed class units on the General Studies branch. As noted in section 5.5, "mixed" here means tested as a class, for instance during compulsory subjects such as Norwegian or Religious Studies. If at all possible, testing groups in specialized, elective courses such as Advanced English or Mathematics was to be avoided. Supplementary Course classes (see 2.2.6) were also avoided. Unfortunately, testing mixed classes was not always possible. Because many of those contacted were English teachers, this meant

that several Advanced English classes were selected for testing. This gave a higher proportion of respondents with the Advanced English Course (see Table 5.29).

**The CLIL and EFL sub-samples**

One exception to letting the teachers contacted select the classes to be tested was made for schools 3 and 4, and for a third that could not take part. These schools were contacted because I knew they had well established CLIL programs, that is to say single classes in Modern History taught in English using English textbooks. At these schools the teachers were asked specifically to select a class receiving CLIL instruction along with a class that was not. The reason for including respondents with a CLIL subject was that personal experience has shown that this kind of instruction is particularly effective in developing English reading proficiency. It would therefore be of interest to compare their results with those of students receiving ordinary EFL instruction only (Hellekjær, 1994a, 1995, 1996). Unexpectedly, a number of respondents from schools 2 and 6 had CLIL classes as well, in this case Physics instruction in English. As can be seen in Table 5.28 above there were 39 respondents with CLIL, in the following referred to as the CLIL sub-sample (See subsection 2.3.2 on Norwegian requirements for CLIL instruction). The remaining 178 respondents had EFL instruction only, and are referred to as the EFL sub-sample.

**The EFL sub-sample**

In the EFL sub-sample the majority of the respondents, 162 (91%) in all, were in traditional General Studies classes. An additional 16 (9%) were from a class specializing in Music, Dance and Drama. These follow a special curriculum where the hours that would otherwise be used for elective subjects such as English or Mathematics are used in the area of Music, Dance, and Drama instead. For English this means that these only have the 5 lessons-per-week Foundation Course. With regard to specialization for the EFL sub-sample as a whole, 55 of the 178 respondents (31%) were following Mathematics in their third year, while 38 (21%) Social Studies. There is a disproportionate number of students, 100 (56%) specializing in English, probably because at least one of the classes tested was an Advanced English Course group. The distribution of upper secondary EFL courses can be seen in Table 5.29 below.

Table 5.29. Upper secondary English course distribution, EFL sub-sample.

| English background | Students | Percent |
|---|---|---|
| Foundation Course (5 lessons-per-week) | 45 | 25 |
| Second Year (3 or 5 lessons-per-week ) | 30 | 17 |
| Third Year Advanced Course (5 lessons-per-week) | 100 | 56 |
| Other | 3 | 1 |
| Total | 178 | 100 |

When it comes to special backgrounds in English, 20 respondents (11%) had studied at English schools abroad for 6 months or more, 7 (4%) had English-speaking parents, 4 (2%) had attended International Baccalaureate programs, and 11 (6%) had other English backgrounds. Last, the sample comprised 71 (40%) boys, and 106 (60%) girls. The vast majority of these, 95%, planned to go on to higher education.

**The CLIL sub-sample**

In this sample 22 of the 39 students (56%) were following Mathematics in their third year, and 5 (13%) Social Studies. The distribution of upper secondary EFL courses is presented in Table 5.30 below.

Table 5.30. Upper secondary English course distribution, CLIL sub-sample.

| English background | Students | Percent |
|---|---|---|
| Foundation Course (5 lessons) | 14 | 34 |
| Second Year (3 or 5 lessons ) | 9 | 23 |
| Third Year Advanced Course (5 lessons) | 16 | 41 |
| Total | 39 | 100 |

With regard to special backgrounds in English, in this sub-sample 3 (8%) had studied at English schools abroad for 6 months or more, 2 (5%) had English-speaking parents, 1 (3%) had attended International Baccalaureate programs, and 4 (10%) had other English backgrounds. The sample comprised 14 (36%) boys, and 25 (64%) girls, and 97% planned to go on to higher education.

**The CLIL and EFL sub-samples compared**

It should be kept in mind that students in Norway may have a CLIL subject parallel to an EFL course (see 2.3.2). Students are also required to volunteer for CLIL instruction. This means that these students might be a somewhat select group with regard to intellect, English proficiency and backgrounds in English. It might also explain why the CLIL respondents' English average grades are somewhat higher, $\overline{X} =$ 4.7 compared to $\overline{X} =$ 4.2 in the EFL sub-sample, and why the mean score for their interest in the subject of English is $\overline{X} =$ 4.9 compared to $\overline{X} =$ 4.2 for the EFL sub-sample. Further comparison of these two sub-samples shows that the CLIL group has a larger proportion of students specializing in Mathematics, 56% compared to 31%, fewer on Social Studies, 26% compared to 13%, and a somewhat lower proportion attending the Advanced English Course, 41% compared to 56%.

Apart from a possible selection effect due to the CLIL respondents being volunteers, and a somewhat higher proportion of students specializing in Mathematics in this group, there is, nevertheless, little systematic difference between two samples. As noted above the 39 CLIL respondents have, nevertheless, been treated as a separate sub-sample, the CLIL sub-sample. The remaining 178 respondents with EFL instruction only are the EFL sub-sample.

**Method**

As in the pilot survey (see section 5.5), the respondents were given two consecutive lessons, roughly 90 minutes, to complete the survey. It was up to the teachers monitoring the test to decide whether respondents should do it in one sitting, or if they were to have a break between lessons.

There was some attrition since a number of students were either absent at the time of sampling, or because 9 forms, six from School 4 and three from School 7 were rejected since they had not filled in large parts of the questionnaire, had not started on the IELTS reading test, or had to break off the test. In addition, a couple of the teachers noted that some students had been difficult to motivate. Two respondents did not answer an entire page each in the questionnaire, apparently by mistake since the rest of the questionnaire and the test were answered conscientiously. These were retained in the sample, one in the CLIL and the other in the EFL sub-sample.

As in the surveys presented in sections 5.3 and 5.4, the questionnaire in this survey (Appendix 3) has a number of self-assessment items on different areas of reading difficulty, six of which (items 39 to 44) could be combined into an additive index measuring English reading proficiency (*Enindex*), and another six (items 49-54) for Norwegian (*Norindex*). For the EFL sub-sample, reliability according to Cronbach–Alpha was for *Enindex* was $\propto = .94$, and for *Norindex* $\propto = .88$. With the CLIL sub-sample it was also high, $\propto = .93$ and $\propto = .83$ respectively. Like in section 5.4, self-assessment items on reading difficulty in English (item 38) and Norwegian (item 48), based upon the Common European Framework common reference level scales for reading, levels A1 to C2, translated into Norwegian, were included. The remaining items provided information on independent variables expected to affect reading comprehension, and about student background.

I corrected the IELTS tests as in the previous comparable surveys. After rejecting the nine incompletely filled-in forms there were 217 respondents, 178 in the EFL sub-sample and 39 in the CLIL sub-sample. As in section 5.4 the scores could be combined into an additive index (IELTS) to serve as a dependent variable. For the EFL sample, reliability according to the Cronbach-Alpha test was high, $\propto = .95$ for 38 items, as for the CLIL sub-sample $\propto = .92$.

### 5.6.3. Results

**The IELTS test results**

The mean scores on the IELTS test for the different groups are displayed in Table 5.31 below, for all of the 217 respondents, and for the EFL and CLIL sub-samples.

Table 5.31. IELTS scores for all respondents, and the EFL and CLIL sub-samples. The maximum possible score is 38.

| Group | Mean IELTS score ($\overline{X}$) | Standard Deviation (SD) | Respondents (N) |
|---|---|---|---|
| All respondents | 22 | 9.2 | 217 |
| EFL sub-sample | 21 | 9.0 | 178 |
| CLIL sub-sample | 28 | 7.9 | 39 |

As already mentioned, IELTS states that those scoring from 1 to 16 points would have little of no chance of passing the test, that those from 17 to 24 might do so given

extensive training, and those with 25 and better have excellent chances. As can be seen, the mean score for the EFL sub-sample is fairly low, and almost seven points below that of the CLIL sub-sample. This has implications that will be returned to below. The distribution of scores for the EFL sub-sample is displayed in Figure 5.11 below.

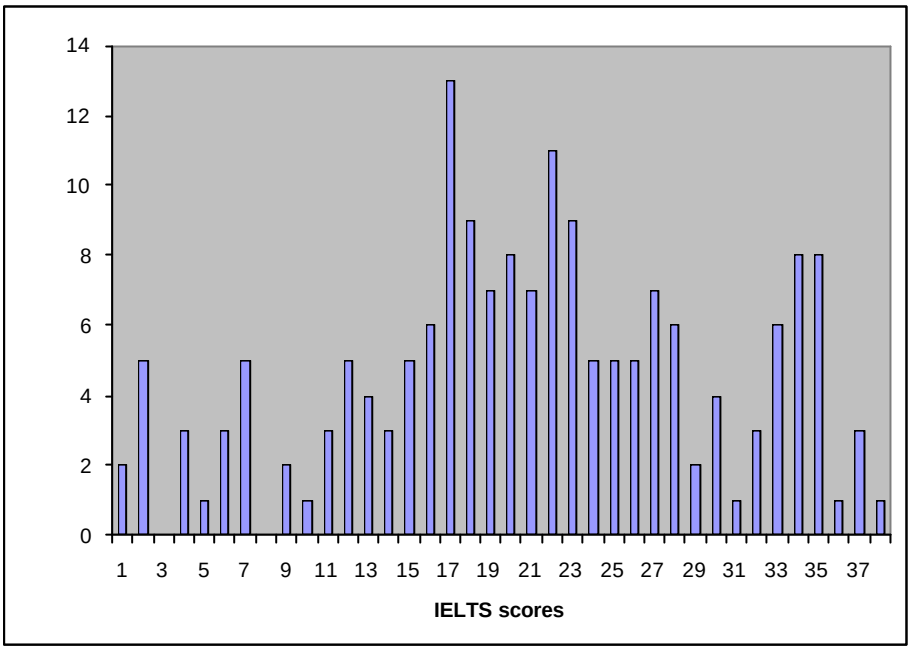



Figure 5.11. IELTS Academic Reading Module scores for the EFL sub-sample. The maximum score is 38, $\overline{X}$ =21, SD= 9.0. N= 178.

As one can see, many of the respondents are distributed around or below a median value of 21, with two-thirds scoring 24 or below. Furthermore, the many unanswered items, as displayed in Table 5.32, reveal that many respondents with low scores worked very slowly, managing from 12 to about 17 correct answers in the time available. A breakdown of the answers is presented in Table 5.32 below.

Table 5.32. Breakdown of the IELTS scores for the EFL sub-sample. The mean values are for correct, wrongly answered and unanswered items as separate categories, for wrong and unanswered questions, and the minimum and maximum scores for each category are also provided. The maximum score is 38.

| | Correct answers | Wrong answer | Unanswered | Wrong and unanswered |
|---|---|---|---|---|
| N | 178 | 178 | 178 | 178 |
| Mean ($\overline{X}$) | 21 | 8.5 | 8.6 | 17 |
| Std. Deviation (SD) | 9.0 | 6.2 | 8.9 | 9.0 |
| Minimum and maximum score | 1-38 | 0-34 | 0-36 | 3-37 |

Of course, the IELTS test format is an unfamiliar one for most Norwegian students. Many would undoubtedly have scored higher if they had had more experience with the task types. On the other hand, they were allowed considerably more than the 60 minutes those taking the IELTS Academic Reading Module are to use on the test, extra time that should, at least partially, have compensated for an unfamiliar test format. Being able to complete the test in the allotted time is part of the IELTS test (see 4.3.3). Consequently, it is disquieting that as many as 66% of the 178 respondents score at or below the level where IELTS states that many would have had poor chances of passing the exam, and that almost half of these again would have had small chances of passing at all.

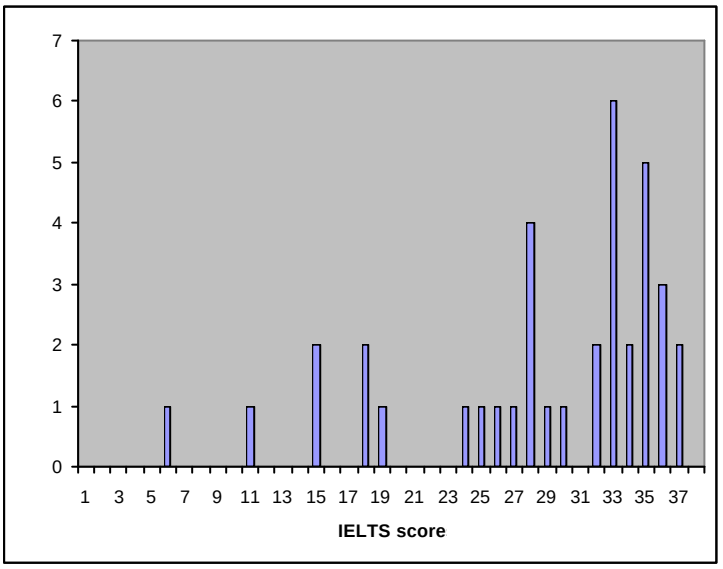



Figure 5.12. IELTS Academic Reading Module scores for the CLIL sub-sample. The maximum score is 38, $\overline{X}$ = 28, SD=7.9. N= 39.

In the CLIL sub-sample only 26% of the respondents score 24 points or below, compared to 66% in the EFL sample. Likewise, while 74% of the CLIL sample score 25 points or above, only one third of the EFL sample does so. In fact, the IELTS scores for this sub-sample, $\overline{X}$ = 28 (SD 8.0), are roughly comparable to those of the university level students tested in section 5.3 with a mean score of $\overline{X}$ = 30 (SD 8.1).

Table 5.33. Breakdown of the IELTS scores for the CLIL sub-sample. The mean values are for correct, wrongly answered and unanswered items as separate categories, for wrong and unanswered questions, and the minimum and maximum scores for each category are also provided. The maximum score is 38.

| | Correct answers | Wrong answer | Unanswered | Wrong and |
|---|---|---|---|---|

| | | | | unanswered |
|---|---|---|---|---|
| N | 39 | 39 | 39 | 39 |
| Mean ( $\overline{X}$ ) | 28 | 5,0 | 8.6 | 9.7 |
| Std. Deviation (SD) | 8.0 | 3.7 | 4.7 | 8.1 |
| Minimum and maximum score | 6-38 | 0-15 | 0-29 | 1-32 |

If the breakdown of the IELTS scores for the CLIL sub-sample as displayed in Table 5.33) is compared those for the EFL sample (see Table 5.32), it would seem that while the frequency of unanswered items is the same, the respondents in the CLIL sub-sample give fewer wrong answers. This would indicate that there are fewer respondents in this sample who tend to read and work very slowly. In this connection I may add that it is also my experience that students in CLIL courses who at the outset read very slowly and carefully had to change how they read to manage the course (Hellekjær, 1996). I have also observed rapid improvement in CLIL students' language proficiency, vocabulary in particular. Since the design of this survey does not allow for any conclusions about causal relations (as mentioned in section 4.2), these results certainly indicate the need for a follow-up study designed to do so.

**Self-assessment versus IELTS scores**

As in the surveys presented in sections 5.2, 5.3, and 5.4 above, items asking students to assess their reading difficulties in English and Norwegian were combined into the additive indices to serve as indicators of English and Norwegian reading proficiency. The individual items in the additive indices were also included to examine and compare areas of reading difficulty such as speed, unknown words, difficult sentences, dense texts, reading the text as a coherent whole, and content understanding.

These self-assessment items are included in this survey, and the comparable indices are here called *Enindex* and *Noindex*. As discussed in subsection 4.5.2, the construct validity of the scores of these items and indices depends upon the respondents having actual experience reading English textbooks at the university level. The upper secondary level respondents in this sample do not have this kind of experience. This means that their answers to the self-assessment items reflect their experience reading English texts at the upper secondary level, and are, of course, not valid for reading at the university level. This is illustrated when the self-assessment scores for different samples are compared in Table 5.34 below.

Table 5.34. Comparison of English self-assessment index scores across samples. The results on a scale from 1 = impossible to understand to 7 = no difficulties.

| Samples | 5.3 | 5.4 | 5.6 EFL sub-sample | 5.6 CLIL sub-sample |
|---|---|---|---|---|
| Mean English self-assessment scores ($\overline{X}$) | 4.6 | 4.7 | 4.9 | 5.7 |
| Standard deviation (SD) | 1.1 | 1.0 | .93 | .81 |
| N | 576 | 53 | 176 | 39 |

The self-assessment scores for both groups of upper secondary level respondents are quite high, unrealistically high if compared to those of university level respondents. This is also the case if correlated with the IELTS scores. For the EFL sample, there is the low correlation between *Enindex* and the IELTS scores, r= .26, p<.01, N=175. This can be compared to the r= .72 of university level respondents discussed in section 5.3. However, the reading experience of the 39 respondents in the CLIL sample who use British or American textbooks in their CLIL subjects might be somewhat more comparable to the university level. This means that a higher correlation between their self-assessment and IELTS scores could be expected. This turned out the be the case, with a correlation between *Enindex* and the IELTS scores of r= .53, p<.01, N=39. Despite this somewhat higher correlation, the mean self-assessment score of $\overline{X}$=5.7 (SD=.81) for the CLIL sub-sample still seem somewhat unrealistic when compared with the scores reported in sections 5.3 and 5.4.

Keeping in mind that the self-assessment scores reflect the experience of upper secondary level respondents reading at their level, how difficult the respondents find reading in English and Norwegian is nevertheless of interest. This is presented in Table 5.35 below.

Table 5.35. Mean values for the self-assessment indices for Norwegian and English for the EFL and CLIL sub-samples. The results on a scale from 1 = impossible to understand to 7 = no difficulties.

| | Norwegian EFL sub-sample | English EFL sub-sample | Norwegian CLIL sub-sample | English CLIL sub-sample |
|---|---|---|---|---|
| Mean $\overline{X}$ | 6.0 | 4.9 | 6.6 | 5.7 |
| Standard deviation (SD) | .70 | .93 | .45 | .81 |
| N | 175 | 176 | 39 | 39 |

The difference between the means found here reflect the trend found reported in sections 5.2, 5.3, and 5.4 where the student respondents clearly indicated they

experienced their Norwegian reading proficiency superior to in English. This result was also reflected in the items 38 and 48 (see Appendix 3) based upon the Common European Framework common reference level scales for reading, levels A1 to C2, that was also used in section 5.5 above (Table 5.25). The answers and valid percentages for both sub-samples in this survey are presented in Table 5.36 below.

Table 5.36. Comparison of levels of reading proficiency in English and Norwegian for the EFL sample using the Common European Framework rating scales. The scales range from A1 (lowest) to C2 (highest).

| Level | Self-assessment grid, levels of reading | Respondents | | | |
|---|---|---|---|---|---|
| | | English EFL sub-sample | Norwegian EFL sub-sample | English CLIL sub-sample | Norwegian CLIL sub-sample |
| A1 | I can understand familiar names, words and very simple sentences, for instance on notices and posters or in catalogues | | | | |
| A2 | I can read very short, simple texts. I can find specific, predictable information in simple, everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple letters. | 4 (2%) | | | |
| B1 | I can understand texts that consist mainly of high frequency everyday or job related language.<br>I can understand the description of events, feelings and wishes in personal letters. | 19 (11%) | 1 (1%) | 3 (8%) | |
| B2 | I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.<br>I can understand contemporary literary prose. | 92 (52%) | 27 (15%) | 14 (36%) | 2 (5%) |
| C1 | I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialized articles and longer technical instructions, even when they do not relate to my field. | 40 (23%) | 57 (32%) | 18 (46%) | 6 (16%) |
| C2 | I can read with ease virtually all forms of the written language, including abstract, structurally or linguistically complex texts such as manuals, specialized articles and literary works. | 21 (12%) | 93 (52%) | 4 (10%) | 30 (79%) |
| | Total | 176* (100%) | 178 (100%) | 39 (100%) | 38* (100%) |

* 2 missing answers

Once again respondents in both samples clearly rate their reading proficiency in Norwegian higher than in English. Nevertheless, taking the difficulty of many texts at the C2 level into consideration, it seems unrealistic that so many of the respondents in either sub-sample place themselves at this level in Norwegian. With regard to

English, however, and for the EFL sample in particular, the mediocre IELTS scores ($\overline{X}$ = 21) stand in contrast to the respondents' fairly high self-assessment of their English reading proficiency. This has implications for the validity of this scale. Unlike the self-assessment indices discussed above that refer to subjective reading experience, items based upon the descriptions used in the European Framework scales might be expected to give a more general, and perhaps less context-dependent description of reading. However, for English the correlation between this item and IELTS scores was low for both the EFL sample, r= .24 (p<.01, N=176), and for the CLIL sample r= .32 (p<.05, N= 39). This indicates that the construct validity of the scores from this scale is questionable, and the need for caution when interpreting these results.

To sum up, both the self-assessment indices and the Council of Europe scales show that there is a large gap between the upper secondary level respondents' beliefs about their English reading proficiency compared to their actual performance on the IELTS test, or to the scores of university level respondents. This mirrors Lehmann's (1999) claim about Norwegian upper secondary school students having quite unrealistic impressions of their English proficiency when starting higher education, an issue I will return to in Chapter 6, subsection 6.1.10 below.

Construct validity notwithstanding, it is also possible that the data presented in this subsection also sheds light upon student transition from upper secondary to higher education. The results indicate that many beginner students risk finding out "the hard way" that their impressions of their levels of competence, here English reading proficiency, are unrealistically high compared to what is actually required of them.

**Upper secondary EFL instruction and reading proficiency**

The low IELTS scores in this sample, as displayed in Figure 5.11 and Table 5.32, are an indication that Norwegian EFL instruction has room for improvement with regard to reading proficiency. Another way of checking the quality of EFL instruction is to see whether completing the Advanced English Course has a positive correlation with the scores for reading proficiency, as in the previous sections. A parallel dummy variable for completing the Advanced Elective English course based upon item 23 was therefore constructed. For the EFL sub-sample there was no significant correlation between this variable and the IELTS scores, r = .01, (p=.85, N=178).

Of course, a possible explanation is negative student selection, that the academically strongest upper secondary students do not necessarily select the Advanced English Course, but for instance courses in the Natural Sciences instead. In fact, when the items for the third year, i.e. the advanced elective courses the students had completed (items 9 to 19) were correlated with IELTS scores, Mathematics (item 9) had a positive and statistically significant correlation, $r = .25$, $p < .01$, $N = 178$, as did Physics (item 10) $r = .23$, $p < .05$, $N = 178$. For the other subjects results were low and not significant. These correlations indicate that selection might, at least partially, contribute to the low scores for the Advanced English Course (see subsection 6.1.8).

**The importance of attitude**

Course choice, however, is only one of several factors. In section 5.4, other factors, such as the importance the respondents' attitudes towards and grades in English turned out to have high correlations with IELTS scores. English grades (item 24), irrespective of course, also have a clear correlation with IELTS scores ($r = .40$, $p < .01$, $N = 176$). For interest (item 25) it was lower ($r = .18$, $p < .01$, $N = 176$). In other words, while for instance completing the Advanced English Course did not covary with IELTS scores, grades do.

How IELTS scores vary with grades is illustrated in Figure 5.13 below. The respondents are divided into two groups. In Group 1 there are 112 respondents who have English grades from 1 to 4. In Group 2 there are 64 respondents with grades from 5 to 6. As can be seen the mean IELTS scores for the different groups differ markedly, and this difference is statistically significant.

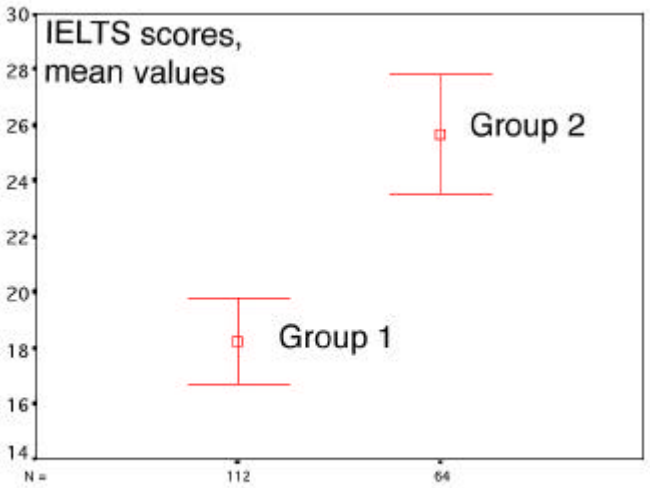



Figure 5.13. Confidence intervals for 112 respondents (Group 1) with grades from 1 to 4, and 64 (Group 2) with 5 to 6. The IELTS scores are the dependent variable. The difference between group means is statistically significant at the 95% level of certainty. The Norwegian grade scale ranges from 1 (fail) to 6 (best).

This pattern remains unchanged when only respondents who have the Advanced English Course are selected.

As mentioned, it is of course possible that selection effects contribute to this outcome to the extent that only weaker students choose the Advanced English Course. It is also possible that there is a time lag in the development of reading proficiency. Third, it may well be that the restricted range of the dichotomous dummy variable for taking the Advanced English Course influences results. However, whether these results are acceptable or not in the light of this expenditure of time and effort invested in a five lessons-per-week course over two years is worth further discussion (see 6.1.8). This is even more imperative in the light of the comparison between the IELTS scores for the CLIL sub-sample and the results for the EFL sample.

**CLIL instruction and IELTS scores**

As noted above, 39 students at four schools had completed single, sheltered CLIL classes in English in either Physics or Modern History. The mean IELTS scores for the CLIL sub-sample and the EFL sub-sample are presented in Table 5.35 above, the distribution of the IELTS scores for the CLIL sub-sample in Figure 5.12. Furthermore, while no correlation between attending the Advanced English Course

and the IELTS test scores could be found, the correlation for CLIL instruction is a higher, r=.30, p<.01, N=217. The confidence intervals for the EFL sub-sample of 178 respondents and the CLIL sub-sample with 39, displayed in Figure 5.14 below, confirm that the difference between the mean scores for these sub-samples is statistically significant at the 95% level.

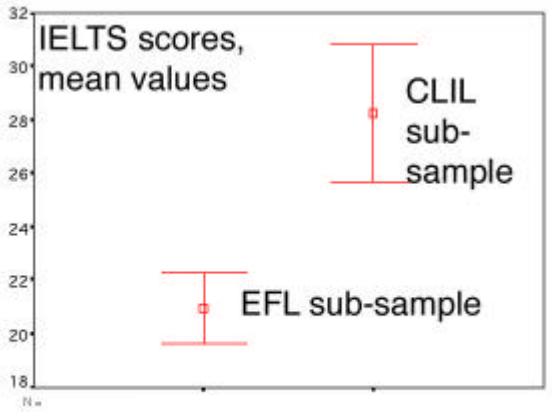



Figure 5.14. Confidence intervals for the EFL sub-sample with 178 respondents, and the CLIL sub-sample with 39, with IELTS scores as dependent variable. The difference between group means is statistically significant at the 95% level of certainty. Maximum IELTS score is 38.

This outcome may, wholly or partly, be attributed to selection factors following the requirement that CLIL students be volunteers, as has been discussed above. Nevertheless, though selection factors can account for at least some of the disparities, it is questionable whether these alone can explain the entire difference in IELTS scores.

With the reservation in mind that the number of CLIL respondents is lower than desirable, two other points about the differences found between the CLIL and the EFL sub-samples should be mentioned. The first concerns the IELTS test itself, that it is its unfamiliar format that is to blame for the low scores for the EFL sub-sample here, as well as for the pilot survey sample in the survey presented in 5.5. Since the CLIL respondents have no more experience with this type of test than do the other respondents and still do quite well, this can be largely discounted. Furthermore, as mentioned in subsection 4.5.3, this has not been a problem for Norwegian respondents in other international surveys.

The second issue relates to why completing a single CLIL subject, taught over one or two years, covaries positively with IELTS scores, while the two-year Advanced English Course does not. This certainly highlights the fact that current Norwegian EFL instruction and syllabi might have room for improvement in the development of academic reading proficiency. Nevertheless, any firm conclusions about the efficacy of CLIL instruction as well as of the Advanced English Course will require follow-up surveys designed to allow for the identification of causal relations.

**Exposure to English and reading habits**

The questionnaire included a number of items about special backgrounds in English (items 8, 27, 29, 30, 31), on having attended schools in English-speaking countries, having had CLIL instruction, or English-speaking parents. For the EFL sub-sample the correlations with the IELTS scores were low and not significant. What was expected to correlate was exposure to English through the media or reading. Items about English reading habits and media use were therefore included in this questionnaire (items 32 to 37) as well as in the previous surveys. In one (item 32), students were asked to indicate how many English novels they had read. Likewise, they were asked about how often they read English books (item 33) and magazines (item 34). There was a similar question about the reading of English on the Internet (item 35), on watching English language films without subtitling (item 36) and the number of English books in their homes (item 37). The correlations between these independent variables and the IELTS scores for the EFL sub-sample are displayed in Table 5.37 below.

Table 5.37. Correlations for English media consumption (items 32 to 37) with IELTS scores. N=178.

| | Eng books read, number (032) | Eng books, reading frequency (033) | Eng periodicals, reading frequency (034) | Internet reading, frequency (035) | English films/videos, frequency (036) | Eng books at home, number (037) |
|---|---|---|---|---|---|---|
| r | ,21 | ,17 | ,15 | ,21 | -,04 | ,13 |
| p | ,00 | ,00 | ,02 | ,00 | ,55 | ,08 |

As can be seen, reading on the Internet comes second to books with regard to correlating positively with the IELTS scores, while the correlation with watching English films/videos is low and not significant. Compared to in the surveys presented in sections 5.2, 5.3, and 5.4, the low correlation for reading English books is

somewhat unexpected (see Table 6.8). However, the number of books students have read is low. The distribution is displayed in Table 5.38 below.

Table 5.38. The number of English books read by the EFL sub-sample, N=177.

| Number of books read (032) | None | 1-5 | 6-10 | 11-15 | 16-20 | 21-50 | 51 or more |
|---|---|---|---|---|---|---|---|
| Respondents | 7 | 91 | 37 | 15 | 10 | 15 | 2 |

These low numbers for the reading of English books reflect that the students seem to have read only the minimum that is required by R94 English courses (see Table 2.3). Low variation with regard to reading can therefore explain the low correlations. Nevertheless, the mean IELTS score for the 27 who had read 16 books or more was higher, $\overline{X}$ = 24 (SD = 9.4), compared to $\overline{X}$ = 20 (SD = 8.9) for the remaining 150.

Table 5.39. Frequency of reading English books, periodicals, Internet texts, and listening to English films/videos for the EFL sub-sample. N=177.

| Items | Never | Rarely | Monthly | Weekly | Several times a week | Daily | Several hours daily |
|---|---|---|---|---|---|---|---|
| Frequency of book reading (033) | 41 | 113 | 13 | 3 | 3 | 2 | 2 |
| Frequency of periodical reading (034) | 29 | 90 | 32 | 16 | 6 | 4 | 0 |
| Frequency of Internet reading (035) | 4 | 38 | 25 | 32 | 39 | 33 | 6 |
| Frequency of film/video reading (036) | 10 | 47 | 21 | 34 | 37 | 21 | 7 |

It is possible that the frequency of Internet reading is higher than could be expected since a number of respondents were attending classes on Computer Science, and many of these were studying Mathematics as well. This means that the positive correlation for reading on the Internet may, at least in part, be attributed to selection factors. Multiple regression analysis with IELTS scores as dependent variable and the items for number of books read (item 32), frequency of reading English in magazines (item 34), and on the Internet (35) as independent variables give an explained variance of only $R^2$ = .08 for the EFL sample. This is quite low compared to

comparable results in the survey presented in section 5.4, and will be returned to in Chapter 6, section 6.1.7.

Last, the low correlation between the frequency of watching English videos and films and IELTS scores is hardly unexpected. One explanation is that most English language films and videos available in Norway are subtitled in Norwegian. Nor can it be possible to pick up many of the low-frequency words important for fluent Academic reading proficiency from films and videos, even without Norwegian sub-titling. It is also possible that the relatively high consumption of films and videos that some respondents admit to is at the expense of activities such as homework or reading.

**Unfamiliar vocabulary and reading proficiency**

Unfamiliar vocabulary is, as mentioned above, considered a key obstacle when reading in a foreign language. The respondents in the present survey, as in those presented in sections 5.4 and 5.5, were therefore asked to underline unknown words and expressions while reading the IELTS texts. Unlike in the pilot test presented in 5.5, where the respondents conscientiously underlined in all three texts, in this sample a large number failed to do so, in particular for texts B and C. Analysis must therefore be limited to the data from Text A, despite a number of missing answers here as well. In Table 5.40 below the data for the EFL sub-sample, and for the CLIL sub-sample is presented.

Table 5.40. Unfamiliar words underlined in Text A by the EFL and CLIL sub-samples. The data comprises mean scores for unknown words underlined per respondent, the standard deviation, and the lowest and highest number of unknown words indicated.

| Text A<br>945<br>words/items | Mean for unknown words | Standard deviation (SD) | Lowest and highest number of unknown words indicated | N |
|---|---|---|---|---|
| EFL sub-sample | 14.0 | 15.0 | 0-71 | 161 |
| CLIL sub-sample | 9.6 | 7.9 | 0-29 | 35 |

What can be observed here is that respondents who have CLIL instruction indicate fewer unfamiliar words in comparison with the EFL sub-sample. The distribution of the underlined words for these three groups, in intervals of ten, is presented in Figure 5.15.

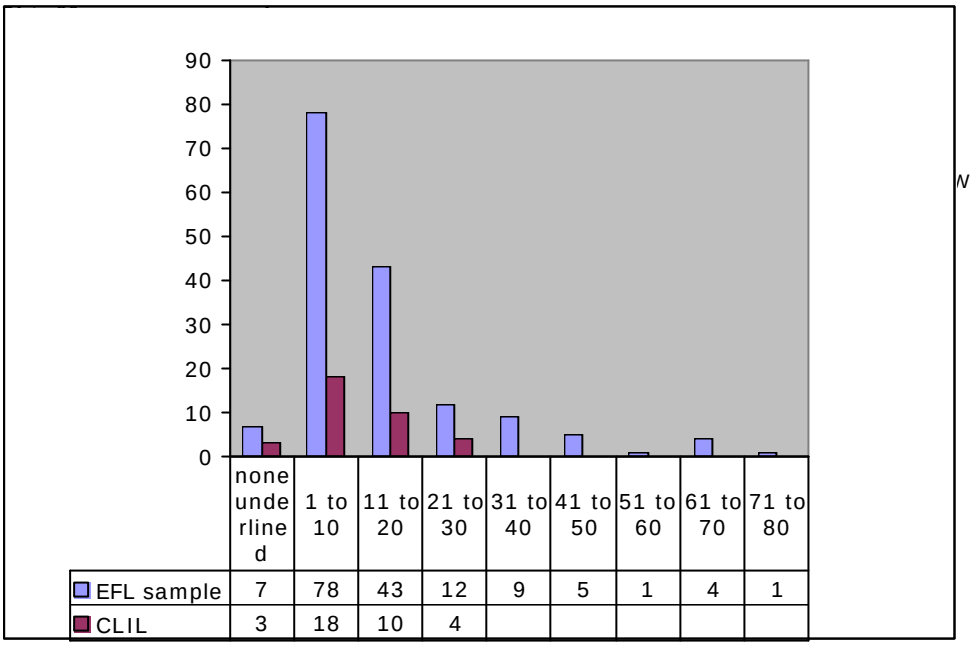



Figure 5.15. Distribution of the underlined, unfamiliar words for the EFL sub-sample and the CLIL sub-sample.

When the item for the number of English books read (32) for the EFL sub-sample was correlated with unfamiliar words indicated for text A, this gave a negative correlation of r= -.31, p=.01, N=161. This means that the more the respondent had read, the fewer the unknown words they noted. The items for reading periodicals (34) and Internet texts (35) also had clear, negative correlations, the former with r= -.25. p<.05, N=160, the latter a comparable r= -.26. p<.01, N=160. Watching films and videos (item 036) has a somewhat lower correlation, r= -.18. p<.05, N=160.

Finally, the correlation with the number of unfamiliar words in Text A and IELTS score is low and negative, r= -.20, p<.05, N=161. This might, partly or wholly, be due to the low, in-sample variation. It could also be because what is meant by an "unfamiliar" word is not properly defined. With hindsight, whether a respondent has no idea of what an "unfamiliar" word means, or is simply uncertain about its meaning, might have clear implications for their ability to answer the IELTS test. The low, negative correlation between unfamiliar words and the IELTS test scores might also be influenced by other factors, such as reading speed and efficient strategies in finding and extracting the information.

All in all, no firm conclusions on the basis of this data can be made. This is not only due to poor operationalization, but also because so many respondents in this

sample, unlike those in section 5.4, failed to underline words in the IELTS texts. A follow-up study should therefore consider using a specialized vocabulary test instead, for instance Paribakht & Wesches' (1997) Vocabulary Knowledge Scale.

**How students handle unfamiliar words**

How students handle unknown words when reading in a foreign language is important for reading proficiency. As in the previous surveys presented in sections 5.2, 5.3 and 5.4, respondents were asked how they handled unfamiliar items of vocabulary (items 55 to 62). Respondents were asked to indicate on a seven point Likert scales from 1 (never) to 7 (frequently) how often they used different ways of handling these. One (item 55) asked how often they used dictionaries. Others were about whether they guessed on the basis of their knowledge of the subject (item 56), from context (item 57), asked a teacher (item 58), parents (item 059), fellow students (item 60), ignored it and kept on reading (item 61), or gave up reading (item 62). The following bivariate correlations are based on the EFL sub-sample.

Table 5.41. Ways of coping with unfamiliar words correlated with the IELTS test scores in the EFL sample. N=177.

| | Dictionary use (055) | Guess from subject knowledge (056) | Guess from context (057) | Ask teacher (058) | Ask parent 059) | Ask fellow students (060) | Continue reading (061) | Give up reading (062) |
|---|---|---|---|---|---|---|---|---|
| r | -.00 | -,03 | ,10 | -,20 | -,24 | -,31 | -,11 | -,28 |
| p | ,99 | ,67 | ,17 | ,01 | ,00 | ,00 | ,15 | ,00 |

As displayed in Table 5.41, most of these ways of handling unfamiliar vocabulary correlate negatively with the IELTS scores. These results can be interpreted as indicative of language problems: that the respondents frequently have to look up unfamiliar words. Alternatively, it may be reading problems, that the respondents feel obliged to look up unfamiliar words, and the more they do so and interrupt the reading process, the lower they score on the IELTS test. Likewise, the low but positive correlations for guessing from context (item 57) can be an indication of a level of language proficiency that allows them to use this strategy, and/or that they have learnt to tolerate some uncertainty and vagueness of meaning and therefore avoid disrupting the reading process. Furthermore, these results mirror those reported in sections 5.3 and 5.4. The same is the case for the tendency to give up reading if

unfamiliar words are too much of a problem (item 62) with the highest, negative correlations in this sub-sample. Last, multiple regression analysis with IELTS scores as dependent variables show that these items have an explained variance of $R^2 = .22$.

**Other variables**

A number of the variables in the questionnaire have not been discussed here, first and foremost because no significant correlations with IELTS scores could be found. Chief among these are the items asking about EFL instruction (63 to 74). These provide an interesting picture of what activities respondents feel are in focus in EFL instruction. For instance, there seems to be fairly high emphasis put on translation and grammar, oral and writing activities, on literature and civilization, on reading in the textbook, and on reading novels in class. In contrast there was little work with vocabulary, the Internet, and on free voluntary reading of novels and periodicals. All in all, the picture that appears is of fairly traditional EFL instruction, perhaps with greater focus on grammar than expected.

### 5.6.4. Summary

The sample surveyed in this section comprised 217 students from seven upper secondary schools in different schools in Norway. 201 students were on the General Studies line and 16 on the Music, Dance and Drama line. It comprised 39 respondents who had received CLIL instruction in one subject, the CLIL sub-sample, and 178 with ordinary EFL instruction only, the EFL sub-sample.

This survey found that two thirds of the respondents in the EFL sub-sample scored below what is considered necessary to pass IELTS Academic Reading. Their mean score was $\overline{X} =$ 21 (SD 9.2) , and 27% of this sub-sample would have little chance of passing at all, having scored 16 out of 38 points or less. In comparison, out of the 39 respondents in the CLIL sub-sample, more than two thirds scored more than 24 points, with a mean score of $\overline{X} =$ 28 (SD 7.9). What seemed a problem for many of the respondents who did poorly was that they read and worked very slowly in English. This resulted in many students being unable to complete many of the IELTS test items in the allotted time, and this may be indicative of their using inefficient ways of reading, in particular the slow and careful reading characteristic of many EFL classrooms (Urquhart & Weir, 1998). It is possible that the difference in the IELTS

scores between the EFL and CLIL sub-samples in particular might go to show that CLIL encourages students to change how they read English texts. Of course selection effects might play a role too.

What is also worth investigating further is that in the EFL sub-sample, the Advanced English Course did not covary positively with the IELTS test scores. In contrast, the advanced courses in Mathematics and Physics did, probably because of selection factors. On the other hand, reading, in particular the extensive reading of English books in numbers of 20 or more, as well as of periodicals and of Internet texts, also showed moderate, but positive correlations with IELTS scores.

Another finding concerned the respondents' self-assessment of their English Reading proficiency. The items in which respondents were asked to assess their reading difficulties that could be combined into additive indices and used as indicators of reading proficiency have low construct validity in this sample. This is because the respondents do not have practical experience reading English texts and textbooks in higher education. What was interesting about the self-assessment scores for both the EFL and CLIL sub-samples, however, was that these are as high as those of the university level samples discussed in sections 5.3 and 5.4. This may indicate that many of the upper secondary students in this sample have an unrealistic impression of their level of reading proficiency when compared to their IELTS test scores. In turn, this raises the issue of possible transition problems for beginner university-level students in their first encounters with English texts and textbooks.

The results of the analysis of all the items in this survey were not included here. For those about the use of reading strategies this was because of poor operationalization, as discussed above. For others, for instance a number of items on upper secondary EFL instruction, this was because no significant correlations could be found. Further analysis, however, will probably require a larger sample, and perhaps a different research design. Many of these items could, nevertheless, provide information about current EFL instruction. This, however, might belong in a separate article.

This was the last of five surveys in this sample. In Chapter 6, section 6.1 the findings from this and the previous surveys are compared.

# 6. SUMMATIVE ANALYSIS AND DISCUSSION

This chapter begins with a summative analysis of the findings in the different surveys presented in Chapter 5. It continues with a brief mention of reliability and validity in section 6.2, followed by the discussion in section 6.3. For convenience, I will in this chapter include the respective page numbers for the many references to tables and figures in earlier chapters.

## *6.1. The five surveys: A summative analysis*

As discussed in subsections 4.6.3 and 5.1.1, this exploratory and descriptive study came to include five parallel, but still somewhat different surveys. These differences lead to my presenting each survey separately, despite the risk of being unduly repetitive. In turn, this mode of presentation makes the present, summative analysis of the data from the five surveys necessary.

My focus in the following analysis is on the main trends in the data from the surveys presented in sections 5.3, 5.4, and 5.6. Findings from the pilot surveys in sections 5.2 and 5.5 are, nevertheless, also included when relevant and comparable.

The five convenience samples in this study comprise respondents from two reference populations (see subsection 4.6.1). The first is senior upper secondary level students in the General Studies branch. The second is beginner and advanced students at the university level. With samples from these two different reference populations it is possible to examine reading proficiency at the different levels, to see whether any changes between levels might be due to selection and/or attrition factors, and how key independent variables covary with reading proficiency across samples from different levels. To facilitate this comparison I have therefore reversed the order of presentation used in Chapter 5 above to begin with data from the upper secondary level (from the surveys presented in sections 5.5 and 5.6). I then compare these findings with those from the university level samples (from the surveys presented in sections 5.2, 5.3, and 5.4).

In the following it should be kept in mind that the English reading proficiency scores are not immediately comparable across all of the five samples. This is because two different means of assessing reading proficiency were used in this study: The

IELTS Academic Reading Module test in the surveys presented in sections 5.4, 5.5, and 5.6, and self-assessment items in the surveys presented in sections 5.2[48] and 5.3 (see section 4.3). However, as mentioned in subsection 5.4.3, the IELTS and self-assessment scores have a high correlation with each other, r= .72. I would therefore claim that this allows comparison with the university level samples where only self-assessment items were used.

### 6.1.1. Reading proficiency compared

I start this subsection by comparing the reading proficiency scores across the samples to see whether, and to what extent Norwegian students master the reading of English texts and textbooks in higher education. Next, I examine whether the reading scores can be attributed to language difficulties or to reading problems in general, irrespective of language, and then how reading proficiency varies between the upper secondary and university levels.

The available self-assessment and IELTS scores for reading proficiency are displayed in Table 6.1 below. Note that the scores for the two sub-samples in the survey presented in section 5.6 are presented separately.

[48] The self-assessment scores in section 5.2 are not entirely comparable to those in sections 5.3 and 5.4 because the latter are based upon revised questionnaires with new or revised self-assessment items in Table 4.2. The *Enindex2* index used in section 5.2 lacks an item for reading speed that was included in the revised questionnaires (see item 40 in Appendix 2).

**Table 6.1.** Overview of samples and self-assessment and IELTS scores in sections 5.2 to 5.6.

| | Section 5.5 | Section 5.6 | | Section 5.2 | Section 5.3 | Section 5.4 |
|---|---|---|---|---|---|---|
| Respondents, level | Upper-secondary level | Upper-secondary level | Upper-secondary level | University level | University level | University level |
| Respondents, number | 21 | 178 (EFL sub-sample) | 39 (CLIL sub-sample) | 66 | 578 | 53 |
| Mean self-assessment scores with standard deviation* | Not available | 4.9 (SD= 0.9) | 5.7 (SD= 0.8) | 6.1*** (SD= 0.9) | 4.6 (SD=1.1 | 4.7 (SD= 1.0) |
| Mean IELTS scores with standard deviation** | 20 (SD= 7.0) | 21 (SD= 9.0) | 28 (SD= 7.9) | Not available | Not available | 30 (SD= 8.0) |

*Self-assessment scores are on a scale from 1 to 7. The lower the score the greater the difficulty.

** The maximum IELTS score is 38.

*** Calculated using the *Enindex2* index, see subsection 5.2.2.

Starting with the upper secondary level data, as displayed in Table 6.1, the mean IELTS score for the EFL sub-sample in the survey presented in section 5.6 is low, $\overline{X}$= 21.[49] It is even lower, $\overline{X}$= 20, for the other upper secondary level sample in the pilot survey presented in section 5.5, and both are below the level IELTS considers necessary to pass the test (24 points, comparable to Band 6). With regard to the IELTS score distribution, 66% of the respondents in the EFL sub-sample in the survey presented in section 5.6, score 23 points or below (see Figure 5.11, p. 200). In section 5.5, (see Figure 5.10, p. 187) 83% of the upper secondary level respondents score on or below this level. It should, however, be kept in mind that the latter sample comprises second-year, not third-year students.

The contrast to the $\overline{X}$= 30 of the 53 university level respondents in the survey presented in section 5.4 is clear. As displayed in Figure 5.6 (p. 167), 83% of this sample score 24 points or above, with 39% achieving 35 to 38 points. This sample, however, is probably biased in favor of better-than-average respondents by being volunteers for the IELTS test (see subsection 4.6.3).

[49] I will return to the CLIL sub-sample scores from section 5.6 below. Here I use data from the EFL sub-sample only since my focus is on Norwegian EFL instruction.

The main point of the survey presented in section 5.4 was to validate the self-assessment scores using the IELTS test scores (see subsection 5.4.3). In addition it was used to "benchmark" self-assessment scores against IELTS scores (see Figure 5.7, p. 169). As can be seen, the 30% of the respondents in the survey presented in section 5.4 who scored 20 points or below on the IELTS test had a mean self-assessment score of $\overline{X}$= 4 or below (on a scale from 1, lowest to 7, highest). The comparable number with $\overline{X}$= 4 or below in the sample in the survey presented in section 5.3 is 185 out of 578 respondents (32%). In other words, there is reason to believe that a large proportion of the 185 respondents in the survey presented in section 5.3 with a mean self-assessment score of $\overline{X}$= 4 or below, find reading English texts quite problematic.

In sum, IELTS scores indicate that about two thirds of the upper secondary level respondents with ordinary EFL instruction surveyed have not attained the level of academic English reading proficiency roughly comparable to Band 6 on IELTS tests. Furthermore, the comparison of IELTS and self-assessment scores indicate that somewhere around 30 to 35% of the university level respondents surveyed also belong in this category.

### 6.1.2. Language or reading problems?

One issue in need of clarification is whether the low reading scores found are due to poor English proficiency, or to reading problems in general. This can be examined by comparing the self-assessment scores for reading in English and Norwegian. Of course, such a comparison presupposes that the respondents are proficient readers of Norwegian in the first place. According to the findings and experience of Bråten & Olaussen (1997) and Fjeldbraaten (1999) this should not be taken entirely for granted. Nevertheless, the extent to which respondents rate their English reading proficiency below their reading proficiency in Norwegian is in the following interpreted as indicative of language difficulties.

**The difference between reading scores in Norwegian and English**

First, in all the surveys there is a general, but by no means unexpected trend that almost all of the respondents consistently rate their English reading proficiency below their Norwegian. In data from the survey of upper secondary level respondents

presented in Tables 5.35 (p. 203) and 5.24 (p. 186), these respondents consistently rate their English reading proficiency as poorer than their proficiency in Norwegian, here using the Common European Framework rating scales for reading. In the EFL sample in the survey presented in section 5.6 for example, 65% rate themselves at the B2 level or below in English, compared to 16% in Norwegian. In the pilot survey presented in section 5.5 the comparable numbers for English are 90% at the B2 level or below compared to 29% in Norwegian. At the university level, the mean self-assessment scores reflect the same pattern, as displayed in Table 6.2 below.

**Table 6.2.** Mean scores for self-assessment index scores for Norwegian and English for university level respondents in the surveys presented in sections 5.2, 5.3, and 5.4. The results are on a scale from 1= impossible to understand to 7= no difficulties.

| Sample | Section 5.2* | | Section 5.3 | | Section 5.4 | |
|---|---|---|---|---|---|---|
| Language | Norwegian | English | Norwegian | English | Norwegian | English |
| Mean scores and standard deviation | 5.6 (SD= 1.4) | 5.0 (SD= 1.0 | 5.7 (SD= 0.7) | 4.6 (SD=1.1) | 5.8 (SD= 0.6) | 4.7 (SD= 1.0) |
| N | 61 | 66 | 572 | 576 | 53 | 53 |

* The scores are not directly comparable to those in sections 5.4 and 5.3 since the indices used in section 5.2, *Noindex and Enindex1* use only three items compared to the six in the indices in sections 5.3 and 5.4.

This outcome is hardly unexpected. After all, Norwegian is the first language for the great majority of the respondents. An alternative means of examining whether language difficulties covary with reading difficulties is therefore to check how many of the university level respondents have mean self-assessment scores for reading in English two or more points below that for Norwegian (see Table 5.3, p. 135, Table 5.7, p. 151, and Table 5.16, p. 171). This comparison is based on the assumption that a difference of two or more points on a seven-point scale is an indication of language difficulties affecting reading proficiency. The respondents in this category are displayed in Table 6.3 below.

**Table 6.3.** English self-assessment scores two or more points below those for Norwegian in the surveys presented in sections 5.2, 5.3, and 5.4.

| Sample | Section 5.2* | Section 5.3 | Section 5.4 |
|---|---|---|---|
| Number of respondents with English self-assessment scores 2 or more points below those for Norwegian | 12 | 188 | 15 |
| Percent of respondents with English self-assessment scores 2 or more points below those for Norwegian | 20% | 33% | 33% |
| N | 61 | 568 | 53 |

* The scores are not directly comparable to those in sections 5.4 and 5.3 since the indices used in section 5.2, *Noindex and Enindex1* use only three items compared to the six in the indices in sections 5.3 and 5.4.

As can be seen, 33% of the respondents in the samples in sections 5.3 and 5.4 have scores for English that are two or more points below than in Norwegian. This bears comparison to the 30 to 35% of the respondents who in these same samples have English self-assessment scores of $\overline{X}$= 4 or below, as mentioned above. [50]

Finally, the scatter-plots of the distribution of self-assessment scores for English and Norwegian are presented in sections 5.3 and 5.4, Figures 5.5 (p. 153) and 5.9 (p. 173), reflect the pattern in Table 6.2 (p. 220). For many it would seem that the difference between languages is so large that these respondents fall below the Linguistic Threshold Level (see subsection 3.5.2). This means that their poor knowledge of English prevents them from drawing upon the processing skills and strategies they have developed in their L1 to read fluently in English. In the following I examine these language difficulties in more detail.

**A closer look at language difficulties**

In this study a way of checking on the importance of language difficulties, and unfamiliar vocabulary in particular, is to see how word-handling strategies correlate with reading proficiency. In the surveys presented in sections 5.3, 5.4, 5.5, and 5.6, several items elicited information on how often the respondents used various strategies to handle unfamiliar words. One was about how often they used

[50] With regard to the lower percentage in the survey presented in section 5.2, this sample comprises mostly Biology students from the University of Oslo who are probably quite select. In addition there are ten respondents (15%) who do not have Norwegian as their L1 (see 4.6.3). Furthermore, a somewhat different self-assessment index is used. These factors together may well explain why the scores in the survey presented in section 5.2 diverge somewhat from those of the other samples, although it can be noted that a number of the respondents have scores that indicate reading problems here as well.

dictionaries. Others were about whether they guessed on the basis of their knowledge of the subject or from context, asked the lecturer or fellow students or their teachers, ignored it and kept on reading, or simply gave up reading altogether. These variables were correlated with reading proficiency as measured by self-assessment as in the survey presented in section 5.3, Table 5.10 (p. 157), both self-assessment and IELTS scores in Section 5.4, Table 5.21 (p. 176), and IELTS scores for the EFL sub-sample in section 5.6, Table 5.41 (p. 213).

The trend was clear across all samples. First, being able to guess or deduce the meaning of unfamiliar words from context, or on the basis of subject-matter knowledge, had low but positive correlations with reading proficiency. Second, the indicators for the degree of dictionary use, consulting lecturers, fellow students, teachers or parents about unknown words all had low, negative correlations. This means the more many respondents indicated that they used outside sources, the lower their reading proficiency scores were. In all of the samples the highest negative correlation was for how often respondents gave up reading due to unfamiliar words. The highest of these was r= -.5 in the survey presented in section 5.3.

Several interpretations of the positive correlations for guessing word meaning from context, or by using subject-matter knowledge, are possible. One might be that respondents who most often guess or infer the meaning of unfamiliar words from context or subject matter have attained a level of language proficiency that enables them to do so, for instance due to extensive reading. Another might be that these respondents have a higher tolerance of unfamiliar words, that is to say they are satisfied with guessing the approximate meaning and are able to tolerate vagueness or ambiguity of meaning. To illustrate what this might mean in practice, if 5% of the words in the texts in question are unfamiliar, this might mean looking up about 27 words per page. It goes almost without saying that such constant interruptions would have a highly detrimental effect on reading proficiency.

At the other end of the scale come those respondents whose poor English proficiency forces them to continuously look up unfamiliar words, or alternatively, they do so because they are used to reading English carefully and for detail. As mentioned, this is a way of reading that for instance Urquhart & Weir (1998) claim is an all-too-frequent outcome of classroom instruction. In fact, this way of reading may well exacerbate any language problems experienced by the respondents to the extent

it leads to additional, and perhaps unnecessary, interruptions of the reading process to consult outside sources.

To sum up, what remains clear is that language difficulties, in particular the number of words respondents do or do not recognize, and how respondents handle these, are crucial for their reading proficiency. This is also indicated by the levels of explained variance ($R^2$) that linear regression gives for the variables on how respondents handle unknown words when correlated with reading proficiency. In the survey presented in section 5.3, this is $R^2$ =.30 with the self-assessment index scores for English. In section 5.4 it is $R^2$ =.29 with the self-assessment index, $R^2$ =.22 with the IELTS scores. For the EFL sub-sample in the survey presented in section 5.6 it is a comparable i.e. $R^2$ = .22.

### 6.1.3. Further information on unfamiliar vocabulary

In the surveys presented in sections 5.4, 5.5, and 5.6 the use of the IELTS test offered the possibility of eliciting additional information on the respondents' problems with unfamiliar vocabulary. This was done, unfortunately somewhat inconsistently across the different surveys, by asking the respondents to underline unfamiliar words in the three texts in the test.

Closer analysis of the IELTS test sheets showed this data to be of limited utility. One reason was poor operationalization, that is to say that what was meant by an unknown word was not properly defined. Second, the fact that so many respondents failed to follow instructions also limited reliability. The possible exception is for Text A, for which the scores for the different samples are displayed in Table 6.4 below.

**Table 6.4** Unfamiliar words in IELTS text A underlined by the respondents in sections 5.4, 5.5, and the EFL and CLIL sub-samples in 5.6.

| Section | Total number of words in Text A | N | Mean value $\bar{X}$, unfamiliar words underlined | Standard deviation (SD) | Highest and lowest number of unfamiliar words underlined |
|---|---|---|---|---|---|
| 5.4 | 945 | 53 | 9.1 | 9.7 | 0 - 52 |
| 5.5 | | 21 | 12.2 | 8.4 | 0 - 32 |
| 5.6 EFL | | 161 | 14.0 | 15.0 | 0 - 71 |
| 5.6 CLIL | | 35 | 9.6 | 7.9 | 0 - 21 |

As can be seen from the numbers in this table 18 respondents from the EFL sub-sample (N=178) apparently ignored or failed to underline unknown words, which is one of several reasons to interpret these data with caution.

Reliability notwithstanding, perhaps the most interesting aspect of this overview is that although a number of respondents have serious problems with unfamiliar words, the numbers are not that high. Most have underlined less than 5% of the words, which for text A means about 47 words. Furthermore, as mentioned in subsection 5.5.4, the majority of the words underlined were subject-specific, having to do with volcanic eruptions. To the extent that 95% is a reasonable minimum this could mean that only a small number of respondents have serious difficulties with unfamiliar words. This introduces an additional possibility – discussed in subsection 6.1.2 above – that it is not only the number of unknown words that contributes to the poor IELTS scores. It is also possible that the problem is compounded by how respondents handle these words, for instance through consulting a dictionary excessively. In other words, it is not necessarily the number of unfamiliar words that is the problem, but the extent to which respondents interrupt the reading process to ascertain their meaning. This will be examined in further detail in below.

### 6.1.4. Ways of reading

As mentioned, in this study the examination of the IELTS test sheets as well as the scores obtained made it apparent that many respondents read and worked slowly and carefully. They gave for the most part correct answers, but did not manage to finish on time. Usually they ran out of time a bit over halfway in the test – often around items 23 to 26 (Appendix 4). To examine this in more detail the available IELTS scores for each sample were broken down into categories for correct, incorrect, and

not answered items for samples 5.4, 5.5, and 5.6. The mean scores with standard deviations for the different samples are displayed in Table 6.5 below.

**Table 6.5.** Breakdown of the IELTS scores for the surveys presented in sections 5.6, 5.5, and 5.4. The mean values are for correct, wrongly answered and unanswered items as separate categories, for wrong and unanswered questions, with standard deviations in brackets

| Samples and level | N | Correct answers | Wrong answer | Unanswered | Wrong and unanswered |
|---|---|---|---|---|---|
| | | Mean scores $\overline{X}$ with standard deviation (SD) in brackets | | | |
| **5.6 EFL sub-sample** upper secondary level | 178 | 21 (9.0) | 8.5 (6.2) | 8.6 (8.9) | 17 (9.0) |
| **5.6 CLIL sub-sample** upper secondary level | 39 | 28 (8.0) | 5.0 (3.7) | 8.6 (4.7) | 9.7 (8.1) |
| **5.5 sample** upper secondary level | 21 | 20 (6.7) | 7.0 (3.9) | 11 (6.4) | 18 (6.5) |
| **5.4 sample** (university level) | 53 | 30 (8.0) | 5 (5.0) | 3 (4.8) | 8 (7.9) |

As can be seen in the study presented in section 5.6, as well as in 5.5, the upper secondary level respondents with EFL instruction only have low IELTS scores, and fairly high scores for unanswered items. The standard deviations indicate high variation for both categories. In comparison, the distribution of scores for the samples in the survey presented in section 5.4, the only group of university students tested with the IELTS Academic Reading Module, is markedly different. Not only do the university level students have high overall mean scores for correct answers, the mean score for unanswered questions is also markedly lower, $\overline{X}$ = 3 (SD= 4.8). In addition, the variation as indicated by the standard deviation is also fairly low. Next, the upper secondary level CLIL sub-sample has almost as high a mean score as the university level sample, $\overline{X}$ = 28. Although the mean score for unanswered items is higher, $\overline{X}$ = 8.6 (SD= 4.6), the standard deviation indicates there is less variation. In other words, one of the main differences between the upper secondary level respondents with ordinary EFL instruction in the survey presented in section 5.6 on the one hand, and university level respondents in the survey presented in section 5.4 in addition to the CLIL sub-sample in 5.6 on the other, is the number of respondents who have many unanswered IELTS items.

To sum up, the distribution of the IELTS scores between correct, incorrect, or unanswered items indicate that many of the upper secondary level respondents in the EFL sub-sample in section 5.6 had a tendency to read and work very slowly. This

might be due to language difficulties, and/or to their having been taught to read and work in this manner. In comparison, the university level respondents in the survey presented in section 5.4 as well as those in the CLIL sub-sample in section 5.6, not only read and work more quickly and make fewer mistakes, they also have fewer unanswered items on the IELTS test. To a certain extent this might be explained by selection factors such as volunteering. It might also be due to CLIL instruction being particularly effective in developing not only the students' vocabularies, but above all in making or teaching them to adjust how they read according to their reading purpose (see for instance Hellekjær, 1996). Reaching a clear conclusion about this, however, would require separate studies designed to identify causal relations.

### 6.1.5. Learning by doing?

It is possible that university level respondents with a poor or marginal reading proficiency at the outset of their studies change how they read, and/or improve by acquiring sufficient English through the reading of the texts on their reading list. If so, this would mean that reading proficiency would covary positively with study experience. In this study this could be examined since all the university level questionnaires included an item on how many credits the respondent had completed. This was correlated with reading scores, either self-assessment or IELTS. In Table 6.6 below the correlations are displayed.

**Table 6.6.** Study experience and reading proficiency. Bivariate correlations between completed credits and self-assessed English reading proficiency scores and IELTS test scores.

| Sample | Section 5.2 | Section 5.3 | Section 5.4 | |
|---|---|---|---|---|
| Dependent variable, English reading proficiecny | Self-assessment scores | Self-assessment scores | Self-assessment scores | IELTS scores |
| Bivariate correlation (r) | .05* | .02* | -.14* | -.01* |
| N | 55 | 571 | 53 | 53 |

* The correlations are not significant.

As can be seen, no significant correlations between study experience and English reading proficiency can be found in any of the samples.[51]

A possible interpretation for the low or non-existent correlations for English is that students do improve with experience with regard to reading proficiency, but that they notice little improvement due to the increasing difficulty of the subjects they are studying. With the reservation that the results are for a single, small sample, the very low correlation for completed credits with the IELTS test in the survey presented in section 5.4 would, however, indicate that this is not the case. This leaves the following alternatives: One is that students' English proficiency does not improve from reading the texts in question, perhaps because these are too difficult to allow them to acquire new terms and expressions. A second is that the number of English texts on the reading lists determines improvement. That is to say that only the respondents who read mostly in English, not just an occasional English text on a reading list comprising mostly Norwegian titles, will improve. A third might be that students have a high tolerance for inefficient strategies and do little to improve their reading proficiency, as mentioned in subsection 3.6.3 in connection with the research by Bråten & Olaussen (1998).

In sum, my data indicates that upper secondary level students who are poor readers of English to start with, remain poor readers throughout their higher education studies. Indeed, it would have been reasonable to expect positive correlations due to attrition, that is to say due to weaker readers quitting their studies or failing, but, as can be seen, the correlations displayed in Table 6.6 do not give evidence of this.

### 6.1.6. Reading habits

In this study extensive exposure to English through the media or reading was expected to covary positively with reading proficiency. Items about reading habits and media use, the reading of books/novels, magazines, and reading on the Internet were therefore included in all five surveys. Analysis showed that the highest correlations were for the reading of books/novels, although the reading of magazines

[51] In the survey presented in section 5.3 I selected respondents by faculty to check on these results. Only for respondents at the Faculty of Mathematics and Natural Sciences did there turn out to be a low correlation between English reading proficiency and study experience, $r=.11$, $p<.05$, $N= 349$. Since it is low and does not represent any consistent trend I would argue that it can be discounted.

and the Internet had only somewhat lower, positive correlations. Since constructing additive indices using these three items did not give sufficiently high alpha-coefficients, I therefore use the data on the reading of books/novels for comparison instead. I start with an overview of the amount of reading done at different levels.

**Table 6.7** The number of English books/novels read in the different samples.

| Number of English books/novels read | Results in percent * | | | | | |
|---|---|---|---|---|---|---|
| | Sample 5.5 | Sample 5.6 (EFL sub-sample) | Sample 5.6 (CLIL sub-sample) | Sample 5.2 | Sample 5.3 | Sample 5.4 |
| None | 5 | 4 | 3 | 7 | 1 | 2 |
| 1-5 | 62 | 51 | 41 | 39 | 17 | 17 |
| 6-10 | 24 | 21 | 23 | 18 | 17 | 15 |
| 11-15 | 9 | 9 | 15 | 10 | 13 | 17 |
| 16-20 | 0 | 6 | 5 | 18 (16 books or more) | 12 | 15 |
| 21-50 | 0 | 8 | 3 | ** | 21 | 17 |
| 51 or more | 0 | 1 | 10 | ** | 19 | 17 |
| Total | 100 | 100 | 100 | | 100 | 100 |

* Calculated upon the basis of the answered items.
** Rubric not included in Questionnaire 1 (Appendix 1).

As can be seen from this overview, most of the upper secondary level respondents had read from one to five books, a smaller number from six to ten. These numbers reflect the Norwegian upper secondary syllabus requirements, all depending on which course they had completed (see Table 2.3, p. 50 ). Only a few, 9% of the EFL sample and 13% of the CLIL sample in Section 5.6, had read 21-50 books/novels or more. At the university level, however, the amount of reading increases to the point where close to 40% have read 21-50 or more books, half of these again considerably more. How this correlates with reading proficiency scores is displayed in Table 6.8 below.

**Table 6.8** Overview of bivariate correlations between the number of English books read and self-assessment and IELTS scores across the different samples.

| Sample | Sample 5.6 (EFL sub-sample) | Sample 5.6 (CLIL sub-sample) | Section 5.2 | Section 5.3 | Section 5.4 | |
|---|---|---|---|---|---|---|
| Dependent variable, English reading proficiency | IELTS scores | IELTS scores | Self-assessment scores | Self-assessment scores | Self-assessment scores | IELTS scores |
| English books read (r) | .21* | .22** | .40* | .47* | .57* | .58* |
| N | 177 | 39 | 61 | 573 | 53 | 53 |

* The correlation is significant at the .01% level.
** The correlation is not significant.

As can be seen, the correlations between the item for the number of books read and reading proficiency, as measured by either self-assessment or the IELTS test, increase markedly from the upper secondary to the university level. Furthermore, multiple regression analysis comprising items on the reading of English books, of magazines, and of reading English on the Internet as independent variables reflects this pattern as well. For the EFL sample in Section 5.6 the explained variance for these was $R^2 = .08$, for the 578 respondents in Section 5.3 it was $R^2 = .29$, in Section 5.4 increasing to $R^2 = .40$.

These figures indicate the importance of reading habits, that is to say those respondents who read English the most also have higher self-assessment or IELTS scores. This was also found in a recent survey of the English proficiency of Norwegian 16-year-olds (Ibsen, 2004). Concluding that extensive reading improves academic English reading proficiency would therefore seem reasonable. However, other factors, first and foremost selection factors, would need to be accounted for before such a conclusion can be drawn.

It is, of course, not surprising that university level respondents have read more English than their younger peers from the upper secondary level (see Table 6.7, p. 228). After all, they are older and have had more time to do so. Nevertheless, the difference in the percentage of active readers between the levels, not to mention the explained variance for reading, seems too large to be explained by this alone. Of course, it is probable that many who had read beyond the minimum required in EFL instruction at the upper secondary level would continue reading.

Nevertheless, the increase in the number of avid readers is so large that this explanation alone is improbable. An additional possibility is that the proportion of non-readers has decreased because many of those with little inclination to read might

not have gone on to higher education at all, failed, or opted for studies where English textbooks are used infrequently or not at all.

To sum up, this study indicates that those who indulge extensively in extracurricular reading of English are among those with the highest academic English reading proficiency scores, either because they read English and thereby improve their language and reading proficiency, and/or because reading covaries with other factors such as personal resources. The latter is a possible explanation for the increase in the percentage of readers from upper secondary to the university-level. It remains to be seen whether factors such as weaker upper secondary level students with little propensity to read not going on to higher education, dropping out underway, or avoiding studies where English texts are used, can explain this increase.

### 6.1.7. Upper secondary EFL instruction

One of the main goals of this study was to see whether, and to what extent upper secondary EFL instruction prepares students for higher education. Since two-thirds of the EFL sub-sample in the survey presented in section 5.6 do not manage an acceptable score on the IELTS test, this is in itself an indication that EFL instruction has room for improvement in this respect. That two-thirds of respondents in the CLIL sub-sample achieve dramatically higher scores highlights this further.

Another way of examining the efficacy of Norwegian EFL instruction with regard to the development of reading proficiency is by examining to what extent completing the upper secondary Advanced English Course covaries with English reading proficiency. It would be reasonable to assume that respondents who have completed this course would get higher reading proficiency scores. If not, this might be seen as an indication that EFL instruction in this course is not designed to improve reading proficiency. Another possibility might be negative selection, i.e. that scores are skewed because a disproportionate number of weaker students opt for this course. Items on upper secondary course choice were therefore included in all the surveys in this study, and a dummy variable for the choice of the Advanced English Course was correlated with self-assessment and IELTS scores. For the EFL sub-sample in the survey presented in section 5.6 the correlation with the IELTS test was low and not significant, $r=.01$, $p=.87$, $N=177$. In contrast, and despite the restricted range of the dichotomous dummy variable, positive correlations were found for the subjects

Advanced Mathematics, r=.25, p<.01, N=177, and Advanced Physics r=.23, p<.05, N=177. This, of course, introduces as a partial explanation the possibility of negative student selection affecting results, i.e. that many of the better students are selecting other subjects than the Advanced English Course.

At the university level, however, the pattern is less clear. At this level it would seem reasonable that beginner students who have completed the Advanced English Course would have had an initial advantage over those who had not. However, in the survey presented in section 5.2, no significant correlation between self-assessment scores and completing the Advanced English Course could be found, r=.14, p=.3, N= 54.[52] In section 5.3, a low and significant correlation was found, r=.13, p<.01, N=572, and a higher one in section 5.4 of r= .27, p<.05, N=53.

The simplest interpretation, based upon lack of difference in scores and the non-existent correlations found for upper secondary and beginner, university level respondents, is that the Advanced English Course, whether it is due to teaching, to content, or a combination of both, does not improve English reading proficiency. This means that the correlations found for some of the university level samples may well be due to other factors that over time lead to differences between university level respondents. One such factor could, as discussed above, be reading habits. Other, and related factors might be grades and interest in the subject of English. These will be examined below.

### 6.1.8. The importance of attitude

In all the samples, closer analysis repeatedly highlighted the covariation between English reading proficiency scores and the respondents' interest in, or lack of interest in the school subject English. The same is the case for grades in English. In Table 6.9 below an overview of the correlations for English grades and interest correlated with IELTS and self-assessment scores across the different samples is presented (Data from section 5.2 is not included due to divergent and non-significant correlations).

**Table 6.9** Overview of the correlations for English grades and interest correlated with IELTS and self-assessment across the different samples.

| Sample | Sample 5.6 | Sample 5.6 | Section 5.3 | Section 5.4 |
|---|---|---|---|---|

[52] Respondents with upper secondary school from abroad were not included.

| | (EFL sample) | (CLIL sample) | | | |
|---|---|---|---|---|---|
| Dependent variable, English reading proficiecny | IELTS scores | IELTS scores | Self-assessment scores | Self-assessment scores | IELTS scores |
| English grade (r) | .40* | .42* | .36* | .53* | .72* |
| Interest in English (r) | .18* | .29** | .38* | .59* | .59* |
| N | 176 | 39 | 576 | 53 | 53 |

* Correlation is significant at the .01 level.
** Correlation is not significant.

That grades and motivation for a subject are related is hardly unexpected. Similar correlations between test scores, grades, and indicators of motivation for or interest for the subject in question, in this case Norwegian, have also been found in the 2001 OECD PISA survey (Lie, Kjærnsli, Roe, & Turmoe, 2001).[53] What the data in this table indicates is that a special interest in the subject of English is higher among university level respondents than among those at the upper secondary level.

As noted above, no covariation between study experience and reading proficiency for university level respondents could be found in this study. The most probable interpretation for the higher correlation for interest is therefore that the proportion of respondents with low grades and little interest in the subject, variables that covary with low reading proficiency scores, has decreased. Whether those with lower grades and/or interest have decided not to go on to higher education, failed or quit their studies, or opted for studies where English textbooks are not used cannot be determined here. Keeping in mind that around 95% of the respondents in the two samples from upper secondary level, sections 5.5 and 5.6, indicated they intended to go on to higher education, this would indicate that many of the more marginal students do not manage the transition to higher education. In the following I will examine one possible reason for this.

[53] See Chapter 6, point 6.7.1 on the influence of motivation on reading scores in Norwegian for Norwegian 16 year olds, and Chapter 9, points 9.3 and 9.4 for scores in Mathematics and Natural Science.

### 6.1.9. Prepared for higher education?

Whether, and to what extent Norwegian university level students have problems reading the English texts and textbooks on their reading lists reflects directly upon the quality of Norwegian upper secondary EFL instruction. Norwegian institutions of higher education do not offer preparatory EFL courses. Therefore, the findings of this study indicate that Norwegian, upper secondary EFL instruction has ample room for improvement in this respect.

Furthermore, the data indicates that many of the upper secondary school respondents overestimate their reading proficiency compared to what will be required of them. In fact, this is one of the more plausible explanations for the data displayed in Table 5.34 (p. 202). The data in this table indicates that there is a rather large gap between how the upper secondary level respondents in section 5.6 assess their English proficiency, and their actual performance, as measured by the IELTS scores. As has been mentioned (see subsection 4.5.3), the self-assessment scores in the sample in section 5.6 only reflect the experience the respondents have reading English at the upper secondary level. Nevertheless, that their self-assessment scores are so high in comparison with their IELTS scores raises two issues: The first is whether the English texts they have read, upon which their self-assessment is based, are sufficiently challenging if EFL instruction is to fulfill its aim of preparing for higher education. The second is whether the somewhat unrealistic impression of their own reading proficiency, as indicated by the gap between what they think they can do and their IELTS test scores, can make the transition between upper secondary and higher education even more problematical for many beginner students.

That many do not manage the transition is indicated by the percentage of weaker students being markedly lower in the university level samples compared to those from the upper secondary level. Whether this is due to students changing to studies where English is not used, quitting altogether, or failing outright cannot be answered here. What does seem to be the case is that those who have an initial advantage in English can be found at the university level, while many of the more marginal students, usually those with grades around 3 to 4 on a scale from 0 to 6, cannot. Of course, good English grades along with a positive attitude towards the subject, and the habit of reading English might well covary with the personal qualities needed to be a successful student. Indeed, the main factor might even be reading

proficiency in Norwegian. In other words, it might be that a larger proportion of the weaker, upper secondary level students would manage the transition to higher education if they were better prepared for higher education.

### 6.1.10. Summary of findings

To start with English reading proficiency, the scores in this study indicate that no less than half, and perhaps as many as two thirds of the upper secondary level respondents with ordinary EFL instruction graduate without being properly prepared for the reading of English texts and textbooks in higher education. The data from the university level samples also indicates that these reading problems persist, although the proportion with reading difficulties decreases to about a third of the respondents surveyed at this level.

At both levels, comparing the respondents' reading scores in English and Norwegian gave reason to believe that the low scores for English are particular to this language, not to reading problems in general. In fact, many respondents seemed to be fluent readers of Norwegian, but had so low scores for English that they obviously fell below the Linguistic Threshold Level. Already at this point, it would seem reasonable to argue that Norwegian EFL instruction has room for improvement with regard to preparing for reading English in higher education.

To continue, how respondents coped with unknown vocabulary correlated fairly highly with reading proficiency. Whether this may be attributed to poor language proficiency, that respondents were forced to continuously interrupt their reading to consult outside sources because of poor language proficiency, or to their having been trained to do so in the EFL classroom was difficult to determine. On the one hand, closer examination of the number of unknown words underlined in the IELTS test texts in the surveys presented in sections 5.4, 5.5, and 5.6 showed that most of the respondents found 95% or more of the words in the IELTS test texts familiar. This would indicate that language problems alone might not explain the low IELTS scores, but that these are exacerbated if respondents put too much effort into ascertaining the meaning of unfamiliar words, and thereby interrupting and slowing down the reading process. In fact, this is one of the interpretations of the distribution of scores on the IELTS test. This indicates the use of a slow and careful approach to reading in English that Urquhart &Weir (1998) claim is an outcome of classroom

reading instruction, and which could also explain the low IELTS scores at the upper secondary level. Indeed, this approach to reading English might well exacerbate any language difficulties by teaching students a low tolerance for vagueness and ambiguity of meaning, leading them to consult outside sources excessively, with the continuous interruptions of the reading process this entails.

One of the more unexpected findings was that university level respondents did not experience improvement in reading proficiency during the course of their studies. That is to say that respondents who started their studies with poor English reading proficiency did not feel improvement in the course of their studies. Instead, the amount of extracurricular reading, the number of English books/novels read in the different samples, turned out to be a key variable. At the upper secondary level, it was clear that the respondents read relatively little. At the university-level, however, there is a far higher proportion of avid readers, so much higher that selection might well be an explanation. That is to say, the number of readers had increased to the point where a probable explanation is that many respondents with a low propensity to read have disappeared. To what extent correlations found for extracurricular reading with IELTS and self-assessment scores is due to language development, or to selection factors is not quite certain. The accumulation of readers in the university level samples would certainly indicate the latter explanation.

Another of the rather unexpected findings was that completing the upper secondary Advanced English Course did not correlate positively with reading scores at the upper secondary level, or for beginner students in higher education. In comparison, upper secondary respondents with CLIL instruction had markedly higher IELTS scores.

Two other variables had high correlations with reading proficiency scores, namely interest in the subject English and English grades. Like with reading, comparison between upper secondary and university level samples highlights the importance of selection factors. That is to say that the accumulation of respondents with a positive attitude towards English, in addition to higher grades at the university level compared to upper-secondary, is again best explained by many of the respondents with little interest in English and poor grades not going on to higher education.

Last, the comparison of self-assessment scores with IELTS test scores indicates that upper secondary respondents assess their English reading proficiency at

levels that are not reflected by their IELTS test scores. Since their self-assessment scores most probably reflect their experience reading English in upper-secondary, this would indicate that the reading "challenges" they have been exposed to at this level do not adequately reflect what will be required of them in higher education. This is problematical to the extent that it contributes to students not managing the transition to higher education.

In sum, the data in the present study calls into question the assumption that Norwegian upper secondary level EFL effectively prepares for the reading of English texts and textbooks in higher education. To start with, although the majority of the university level respondents seem to manage fairly well, a third or more have considerable difficulties. Furthermore, the IELTS test scores show that as many as two-thirds of the respondents from the upper secondary level with ordinary EFL instruction have not attained an adequate level of English reading proficiency either. Closer analysis shows that the reading problems are due to a combination of poor language proficiency on the one hand, and a counterproductive tendency towards careful reading and excessive focus on the meaning of unknown words on the other. In fact, for many respondents language deficiencies seem to be exacerbated by these counterproductive reading and word handling strategies.

Finally, the comparison of the scores and covariations between the upper secondary and the university level respondents indicates that many of the upper secondary respondents with moderate reading scores, not to mention English grades, interest in the subject, and propensity for extracurricular reading apparently do not go on to higher education. What remains unclear is whether this is due to attrition, that is to say students having entered higher education not managing the transition due to for instance poor reading proficiency, or due to personal factors such as lack of interest in continuing their education. Some attrition is, of course, inevitable. However, to the extent respondents who are interested in getting an academic degree fail because of, for instance, poor reading proficiency that in turn can be attributed to weaknesses in Norwegian EFL instruction, it is unacceptable. I will return to this in section 6.3 below.

## *6.2. Reliability and validity revisited*

As discussed in Chapter 4, the reliability and overall validity of this descriptive and exploratory study of Norwegian students' Academic English reading proficiency depend upon:

- the construct validity of the tests used to measure reading proficiency;
- to what extent samples tested and surveyed are generalizable to the reference population;
- the validity of the statistical conclusions.

In this section I will briefly recapitulate some of the main points from Chapter 4. To start with construct validity, whether the IELTS Academic Reading Module and the self-assessment items actually measure English reading proficiency, and that the scores give a valid and useful picture of the respondents' proficiency, was discussed in section 4.5 above. I argued there that this was well documented for the IELTS test, and based my arguments for the construct validity of the self-assessment items on research on the validity of self-assessment, on describing their operationalization – how the items tapped different aspects of the reading construct (see section 3.7), and above all on the high correlation with the IELTS test scores (r =.72) found in subsection 5.4.3.

With regard to statistical conclusion validity, discussed in subsection 4.7.3, I based my arguments for the statistical conclusion validity of the calculations upon the acceptable levels of strength and significance for the fairly simple bivariate and multivariate calculations found, the attempts made to preclude systematic error, and the taking of restricted range into consideration when relevant. Of course, in the present exploratory and descriptive study no claims are made about causal relations.

The perhaps most problematic aspect of this study is the issue of external validity, namely to what extent the results from the samples surveyed allow for generalization of the results to the reference population in general. The limitations with regard to external validity are several. One is that the number of respondents surveyed and tested is low in proportion to the reference populations. Second, neither the upper secondary level nor the university level samples were representative, meaning they were selected at random from the reference population, as discussed in

detail in subsection 4.6.4. In sum, the constraints lead to the selection of convenience samples that I argue are biased in favor of better than average students.

However, this positive bias does not mean that the scores and covariations found will not be found in the reference population in general. After all, these were found in several samples, and the scores were reasonably consistent as well. This means that it is highly probable that these scores and covariations would be found in randomly selected samples from the reference populations in a repeat survey. Of course, their strength and significance might differ somewhat.

Given the limitations in the sampling no firm claims can therefore be made with regard to validity of these findings beyond the samples in this study. This would require a follow-up study with larger and representative samples. Nevertheless, I would argue that the findings and trends found in this survey present a useful, although possibly somewhat optimistic picture of the English reading proficiency of Norwegian students, ranging from the senior levels of the General Studies branch of upper secondary school to beginner and advanced students at the university level.

## 6.3. Discussion: Norwegian EFL instruction as preparation for higher education

Preparing for higher education is one of the main functions of the General Studies branch. What areas of knowledge, and which skills this requires vary from subject to subject. For English as a school subject a minimum requirement would be effectively preparing upper secondary students for the reading of English texts and textbooks in higher education. Therefore, if a sufficiently large number of senior students from this branch graduate without having attained this level of proficiency, one conclusion would be that it is necessary to revaluate upper secondary EFL teaching, syllabi, and examinations. An alternative conclusion, of course depending on the numbers involved, is that this is an inevitable, even acceptable outcome. This is because it is hardly reasonable to expect each and every student graduating from the General Studies branch to be capable of higher education.

In the following discussion I will argue for the first view, that the trends summarized in Section 6.1 above indicate that EFL instruction needs to be changed because too many students in the General Studies branch do not graduate with the

required levels of reading proficiency. I will also argue that this is due to weaknesses in EFL instruction and syllabi that can, and should, be remedied. As mentioned in sections 4.6 and 6.2, this descriptive study has its limitations with regard to external validity and identifying causal relations. Nevertheless, in the following discussion I will, for the sake of explicitness, and not to mention to underpin my arguments, risk drawing conclusions and making interpretations beyond what may be merited by the sampling and research design of this study.

### 6.3.1. Syllabi and course requirements

Before starting to discuss data from the surveys in this study in more detail, I would like to begin with the outcome of the evaluation of Norwegian EFL syllabi presented in Chapter 2 of this study. This showed that Norwegian, upper secondary EFL syllabi and course requirements are characterized by a lack of consistency with regard to preparing for higher education.

According to both the Veierød and the R94 English syllabi, the role of EFL instruction in preparing for higher education is the task of the second and third year English courses. However, as discussed in section 2.4 (see Table 2.3, p. 50), for both syllabi this goal is contradicted by the very moderate syllabus requirements for reading. The second problem is the course requirements. Both Veierød and R94 effectively undercut the role of the second and third year courses in preparing for higher education by making the first year, Foundation Course in English the de-facto minimum requirement for continuing to higher education. In the Veierød Curriculum this was to make room in the timetable for students who wished to study three advanced courses in the Natural Sciences, and later for advanced courses in French or German. For students following the Veierød curriculum, however, these requirements meant few, and fairly select students. In comparison, the R94 curriculum increased the numbers involved by allowing students with a vocational background to qualify for higher education by taking the Supplementary Course, which also means completing the Foundation Course only. It is also the requirement for other popular lines, such as for Music, Dance and Drama. As can be seen in Table 2.4 (p. 56) and Table 2.5 (p. 57), this means that considerable numbers of students qualifying for higher education do not get more than the English Foundation Course.

It is therefore somewhat paradoxical that in neither the Veierød nor the R94 syllabi for the Foundation Course is the role of this course in preparing for higher education specified or set as a goal. Nor is this taken into account in the content of the syllabus. I would argue that this reflects a state of affairs where it is taken for granted that the upper secondary school qualifies for higher education without proper consideration of what this actually involves and requires, which I will return to in subsection 7.3.1 below.

### 6.3.2. An acceptable outcome?

The data summarized in Section 6.1 paints a fairly unflattering picture of how Norwegian EFL instruction develops reading proficiency. Not only do the test scores indicate that about two-thirds of the upper secondary level respondents with ordinary EFL instruction graduate with a poor or marginal ability to read university level English texts and textbooks. They also show that these problems persist since about one third of the university level respondents surveyed have difficulties as well. A more favorable interpretation, however, is possible. This would be that if two thirds of the university level students manage to read English texts and textbooks reasonably well, Norwegian EFL instruction should be considered a success. In the following I will argue against this more positive interpretation of the data.

First, I would argue that when the IELTS test scores for the EFL sub-sample in Section 5.6 show that two-thirds of the respondents do not attain a IELTS score of Band 6 or better for such a fundamental skill as reading English, this can hardly be acceptable. Not only because of this branch's role in preparing for higher education, it is also unacceptable in the light of the emphasis put on EFL instruction in Norwegian schools from the primary to the upper secondary level. In addition comes the Norwegian students' extensive exposure to English through music, computer games, and subtitled and non-subtitled English language films and television programs (see Bonnet, 2004; Ibsen, 2004). Last, and almost adding insult to injury, this sub-sample is, as mentioned in subsection 4.6.4, most probably biased in favor of better-than-average respondents.

With regard to what an acceptable outcome would be, I would argue that the IELTS scores of the CLIL sub-sample in Section 5.6 (see Figure 5.12, p. 210), where two thirds of the respondents score 24 points or better, should be a minimum.

Actually, the level found in section 5.4 where 83% of the respondents manage 24 IELTS points or better, and where there is, as can be seen in Figure 5.6 (p. 167), evidence of a ceiling effect, would be a more reasonable goal. After all, the IELTS test has been developed to screen beginner students that are often from countries where the mother tongue is far more different from English than Norwegian is, where media exposure to the language is lower, and the educational system has fewer resources than in Norway. This would make it reasonable to expect the test to be too easy for most Norwegian respondents.

The second point concerns the university level samples and the difference between scores for reading in Norwegian and English as analyzed in subsection 6.1.2. These go to show that in all the samples the respondents rate their reading proficiency in Norwegian better than in English. For about a third of the university level respondents, however (see Table 6.3, p. 221), the difference is so large as to indicate that it is their English linguistic proficiency, not their reading proficiency in Norwegian that is causing problems. In other words, it is possible that otherwise capable respondents would have avoided these difficulties given better English proficiency.

### 6.3.3. Acceptable attrition?

My third argument against a too positive interpretation of two-thirds of the university level respondents being able to manage to the reading of English as compared to the one third at the upper secondary level, is that this is probably due to selection. To start with, it should be kept in mind that 95 to 96% of the upper secondary respondents in the surveys presented in sections 5.5 and 5.6 indicated they intended to go on to higher education. It is therefore probable that much of the observed difference between the upper secondary and the university level samples with regard to reading proficiency is due to respondents with more marginal reading proficiency not applying for higher education after all, quitting, or failing at an early stage.

This is certainly indicated by a closer examination of the results presented in subsection 6.1.9, where the distribution of grades, interest in the subject, and IELTS and self-assessment scores for samples in the surveys presented in section 5.3, 5.4, and 5.6 are compared. This comparison shows that most of the EFL sub-sample respondents with low grades also have fairly low IELTS scores (see Figure 6.9, p.

232), and that the same is the case for interest for English and IELTS. In comparison, both reading proficiency scores (see Table 6.1, p. 218) as well as the correlations with interest in the subject (see Table 6.9, p. 232) are markedly higher for the university level samples. Furthermore, the English grades in the EFL sub-sample in Figure 5.13 (p. 206), compared to those in the sample in Section 5.4 indicate that the percentage of respondents in the category with grades 3 to 4 and little interest in English has clearly decreased at the university level.

Yet another indication of possible selection effects can be seen in the comparison of the data for extracurricular reading of English. As can be seen in Table 6.7 (p. 228), few among the upper secondary level respondents have read much beyond the compulsory minimum required by EFL instruction. About 10% at this level had read 21 books or more. At the university level, however, the percentage increases to about 40%. As mentioned in subsection 6.1.7, this increase is so large that a probable explanation can be that many respondents with little propensity to read English have either failed, or opted for studies without English texts on the reading lists. Those remaining, in particular those who have read extensively, have increased their advantage. This can be seen from the correlations found between reading and IELTS and self-assessment scores displayed in Table 6.6 (p. 226).

To sum up, I would claim that the improved reading scores for university level students in this study is due to the accumulation of respondents with an initial advantage, perhaps in English, on the one hand, and the attrition of these with an initial disadvantage on the other. In other words, it would seem that many upper secondary respondents who wish to continue to higher education do not manage to do so because they have not been properly prepared for higher education, in English, or other subjects for that matter. This can hardly be acceptable for those affected, or for a country that needs well-educated people.

### 6.3.4. A vocabulary and a reading problem

This discussion might start with the question to whether the poor scores for English reading proficiency are due to language or to reading problems? Based upon the data in section 6.1 I would argue for both alternatives.

In section 3.7 reading is described as a process that involves recognizing the written word, which along with syntactic parsing contributes to the formation of semantic propositions. At the higher-level of the processing these propositions link to form a network, a text model that is comparable to a text summary. This text model interacts with the language, content knowledge, and processing capabilities of the reader to form a situation model, a reader's elaborated interpretation of the text. Reading is fluent to the extent that this process, at the lower-levels in particular, proceeds automatically and leaves as much as possible of the limited processing capacity of the working memory free for higher-level processing. If the reader does not know the meaning of one or several words he or she may compensate by drawing upon other sources of knowledge, be it of the subject or other contextual factors. However, this taxes the limited capacity of the working memory, which means reduced reading fluency because there is less processing capacity available. Consulting outside sources, such as dictionaries, will also disrupt the reading process. This means, the more unfamiliar words in a text, the less fluent the reading process will be, up to the point where reading comprehension fails or the reader gives up in frustration. In this study a number of respondents obviously belonged in this category, for instance in the survey presented in section 5.3 where a number of respondents indicated that they often gave up reading when faced with too many unfamiliar words.

On the other hand, it is questionable whether unfamiliar words alone are enough to explain the poor IELTS scores of many of the respondents in this study. This is because when respondents were asked to underline unfamilar words in the IELTS texts, as can be seen in Table 6.4 (p. 224), the majority of the respondents underlined less than 5% of the words. As discussed in subsection 3.5.2, many consider knowing 95% of the words in a given text sufficient. There were, of course, those who obviously had problems with vocabulary, the EFL sub-sample in section 5.6 in particular, as indicated by the mean numbers of unknown words and standard deviations for these. I would argue, however, that the problem of unfamiliar words is exacerbated by how the respondents handled this difficulty. Closer examination of the IELTS test sheets showed that many respondents read and worked very slowly and carefully in English, making few mistakes but leaving many items unanswered. This indicated the slow and careful approach to reading in English that Urquhart & Weir (1998) claim is an outcome of classroom reading instruction. Indeed, this tendency to read slowly and carefully, perhaps coupled with a low tolerance for ambiguity and

vagueness caused by unfamiliar words, as mentioned in subsection 6.1.5. This might be able to explain the difference between the IELTS scores of EFL sub-sample in the survey presented in section 5.6 on the one hand, and of the CLIL sub-sample as well as the university level sample in section 5.4 on the other.

To exemplify, I would like to draw on my personal experience teaching an upper secondary CLIL course in Modern History for senior students in the General Studies branch. At the beginning of the course many students tried to read their British, World History textbooks in the careful way they were accustomed to from EFL instruction, using the dictionary extensively in an attempt to reach a detailed understanding of the text (Hellekjær, 1996). When asked to read seven or eight pages at a time, even the better students immediately started complaining about this being extremely time consuming. It was not until I instructed them to read in a different way, that is to say to achieve a general instead of a detailed understanding of the content in the history texts, and taught them to limit their dictionary use and instead tolerate some ambiguity and vagueness of meaning, that the students managed to keep up. Once they had changed their way of reading these students not only gained in self-confidence with regard to reading, they also rapidly acquired the subject specific vocabulary they had been struggling with and were soon reading quickly and reasonably fluently. In fact, this mirrors Takala's (2000, p. 52) claim that CLIL instruction "can lead to very good language learning, good academic performance and [. . .] other cognitive benefits."

I would contend that this "mechanism" can account for many of the findings in this study. To start with the better IELTS scores of the CLIL compared to the EFL sub-sample in section 5.6, this is not only due to the former having volunteered for the course, but due to their having to change the way they read English. That they also, as illustrated in Table 6.4 (p. 224), underlined fewer unknown words could be due to their having learnt to tolerate greater uncertainty or vagueness of meaning, to having become better at deducing word meaning from context, or, of course to having improved their vocabulary and language in general. Likewise, this would explain the high positive correlations for the reading of English books with IELTS and self-assessment scores. Last, I would also argue that this, at least in part, explains the lack of any positive correlations for the Advanced English Course with reading proficiency scores, as is discussed in more detail below.

### 6.3.5. EFL instruction

Since this is crucial to explaining my findings, and to the main goals of my study, I would like to discuss the poor showing of the Advanced English Course and relate this to Norwegian EFL instruction in general.

The Advanced English Course represents a considerable amount of time, effort, and resources, comprising five-lessons-per-week over two years. Furthermore, both the 1994 and the revised R94 syllabi for the General and Advanced English courses clearly specify the importance of preparing for higher education. The 2001 revised version of *Læreplan for vidaregåande opplæring Engelsk studieretningsfag, alle studieretningar* puts this as follows: "English is to provide students with a basis for college and university studies, and prepare for active and critical participation in an increasingly internationalized society, for work and for recreation" (point.1.1, my translation).

On the one hand, the syllabi thus clearly state the role of EFL instruction in preparing for higher education. The data in this study also shows that many upper secondary respondents do well in higher education on the basis of current EFL instruction, first and foremost those with the better English grades. On the other hand, as in section 2.4 above, I argue that neither reading requirements nor examinations are designed to ensure that the majority of General Studies branch students are forced out of their tendency towards careful reading for detail exclusively, which Urquhart &Weir (1998) claim is typical of classroom reading.[54] Nor do they learn to read for general understanding, to adjust how they read to reading purpose, and to tolerate some ambiguity and vagueness in the meaning of unfamiliar words.

I base this claim on extremely moderate requirements of the R94 EFL syllabus with regard to reading that is displayed in Table 2.3 (p. 50). That little additional reading takes place is also confirmed in this study, since it shows that few of the upper secondary level students in Section 5.6 indulge in reading English (see Table 5.38, p. 210, and Table 6.7, p. 228). In other words, as long as the current syllabus requirements for reading remain in place, it is difficult to see how most General

[54] A recent European level study of the English proficiency of 16 year olds indicates that Norwegian EFL instruction in the 10 year compulsory school is strongly reliant on following the English textbook, and that there is less emphasis on extensive reading that in other countries (Ibsen, 2004). In addition there is a general lack of resources such as class sets of books for reading, which again forces reliance on the textbook and on working with short texts.

Studies branch students will learn to use other strategies than careful reading for detailed understanding. In addition, the R94 English examination requirements fail to exert any pressure in this direction. This can also explain why, syllabus aims notwithstanding, completing the Advanced English Course does not result in higher IELTS scores, in contrast to completing a CLIL course.

A last point concerns vocabulary development. As was discussed in subsection 3.5.2, estimates of the level of vocabulary required for the reasonably effortless and fluent reading of academic texts varies from being able to recognize 95% of the given words in a text to as many as 99% (Carver, 1994; Hazenberg& Hulstijn, 1996). In fact, reaching this level will not only require extensive and systematic vocabulary instruction, currently a neglected aspect of Norwegian EFL instruction (Simensen, 2000a, 2000b), this will also require massive reading practice coupled with vocabulary development tasks and activities (Coady, 1997; Day & Bamford, 1998; Grabe, 1999; Paribakht & Wesche, 1997). In this light, the syllabus's minimal requirements with regard to reading in Norwegian EFL is problematical. That is to say if it is to live up to its stated goal of providing "students with a basis for college and university studies, and prepare for active and critical participation in an increasingly internationalized society, for work and for recreation" (*Læreplan for videregående opplæring, Engelsk Studieretningsfag i studieretning for allmenne, økonomiske og administrative fag,* 1994, point 1.1, my translation).

### 6.3.6. Making the transition to higher education

As I have claimed above, the difference between the scores of upper secondary and university level students indicates that many students do not manage the transition to higher education. I have suggested that poor reading proficiency, in English and possibly in Norwegian as well, is at least partly to blame. One problem is how students who are used to reading carefully to achieve a detailed understanding of a text, will react to suddenly having to read long texts rapidly and independently as is necessary at the university level. Another is whether this transition problem might exacerbate the shock of realizing what they believe themselves able of mastering, based on their experience of their upper secondary education, does not reflect what is actually required of them. To focus on English, this is one of the criticisms Lehmann (1999) directs at Norwegian EFL instruction. It is also a possible interpretation of data

from this study, as displayed in Table 6.1 (p. 218). This shows that the upper secondary level respondents in the sample in the survey presented in section 5.6, assess their English reading proficiency at a level where the gap between these scores, and their actual performance as measured by the IELTS test, is unduly large.

I would argue that this gap indicates that the challenges posed to the students by the EFL instruction they had experienced in the General Studies branch do not to a sufficient extent reflect what will be required of them in higher education. I would also suggest that this may increase the problems many will experience in the transition to higher education. Last, I would also contend that this reflects negatively on Norwegian upper secondary EFL instruction and its aim of preparing for higher education.

# 7. CONCLUSION

I start this chapter by relating the findings to the aims and goals of this study. Next, in section 7.2, I suggest further research, and in section 7.3 conclude with the implications my results have for Norwegian EFL instruction.

## *7.1. Summing up: Aims and goals*

As stated in section 1.3 above, the main goals of this study were as follows:

1. to ascertain whether, and to what extent Norwegian university level students have problems reading English texts and textbooks on their reading lists, and compare with the English reading proficiency of senior, upper secondary level students from the General Studies branch;
2. to ascertain whether any reading difficulties are due to general reading problems, that is to say in Norwegian as well as English, or if they are exclusive to the reading of English and therefore due to language problems;
3. to elicit information on the nature of any reading difficulties;
4. to examine a number of independent variables expected to covary with English reading proficiency. These are:
    - Study experience
    - Upper secondary EFL course choice
    - Upper secondary CLIL courses
    - Reading habits
    - English grades
    - Interest for English as a subject;
5. to examine the extent of student attrition in the transition between upper secondary and higher education by comparing the data from the upper secondary school samples with those from the university level.

To start with the first goal, in a sample of 178 upper secondary level respondents with EFL instruction only, two thirds achieved IELTS scores below the Band 6 level. This is considered a minimum for admission to British and Australian universities, and more than half of these respondents again scored well below this level. In other words, the IELTS scores indicate that many students do not graduate from the General Studies branch with the academic English reading proficiency they will need in higher education. Furthermore, the data on the reading proficiency from the

university level samples indicate that these problems persist. This is because at least one third of the university level respondents in the present study find reading the English texts and textbooks on their reading lists difficult.

Second, at the university level, comparing the self-assessment scores for English and Norwegian reading proficiency indicates that these difficulties are specific to reading in English. The respondents evaluated their proficiency in this language as markedly lower than in their first language. In fact, for a number of respondents the difference between languages was so large as to indicate that respondents fell below the Linguistic Threshold Level.

Third, with regard to the nature of the reading difficulties, closer analysis indicates that these comprise difficulties with unknown vocabulary on the one hand, and a counterproductive tendency towards careful reading for detailed understanding on the other. In fact, to the extent that respondents unduly consult outside sources and constantly interrupt the reading process, it would seem that the tendency to read carefully for a detailed understanding exacerbates problems with unknown vocabulary. This inference was made on the basis of comparisons of the IELTS scores of the upper secondary level respondents with EFL instruction with those with CLIL instruction. Compared to the latter group a larger proportion of the sub-sample with EFL instruction only indicated greater problems with unknown words, many also proved unable to complete the IELTS test in the time allotted.

Fourth, it turned out that this combination of factors could contribute towards explaining several of the covariations, or lack of these, between English reading proficiency and other independent variables. The first of these was the lack of any positive correlation for completing the Advanced English Course with reading proficiency scores, both for General Studies branch and beginner students at the university level. This might be partly due to negative selection, that fewer of the capable students opt for this course. Second, neither the syllabi for the first year, upper secondary English Foundation Course or for the other upper secondary EFL courses require sufficient reading to accustom students to using a variety of reading strategies instead of careful reading for detailed understanding only, and not to mention to effectively develop vocabulary knowledge.

The low emphasis put on reading can also explain why the respondents in the upper secondary CLIL sub-sample have higher IELTS scores than can reasonably be explained by these respondents being volunteers. Although the single subject CLIL

courses represent the expenditure of far less time and resources than the Advanced English Course, I have argued above that they are particularly effective in teaching respondents to read for overall meaning instead of for detailed understanding, as well as for imparting the ability to tolerate at least some ambiguity and vagueness when guessing the meaning of unfamiliar words and expressions. Likewise, this would also explain why extracurricular reading is one of the independent variables that has the highest positive correlation with reading proficiency scores.

Last, we have the observed differences in the reading proficiency scores for the upper secondary EFL sub-sample in the survey presented in section 5.6, and the university level respondents in sections 5.2. 5.3, and 5.4. Since no correlation between reading proficiency and study experience could be found in this study, this leaves attrition as the main explanation. The differences observed between the levels with regard to reading scores, English grades, interest for the subject, and not to mention a larger proportion of readers of English, are so large that they must be due to selection. That is to say, that many of the more marginal upper secondary respondents simply fail to make the transition to higher education. In fact, it is quite possible that many have reading problems with Norwegian as well as English, and that this is a more important, even decisive factor determining which students quit higher education at an early stage. This study did find that a number of upper secondary respondents rate their Norwegian reading proficiency at rather low levels. However, this issue cannot be resolved with the data in this study.

To return to English, the data in this study shows that upper secondary level respondents tend to rate their English proficiency as far better that their actual test scores merit. This apparent mismatch between what the respondents think themselves capable of, and what is actually required of them with regard to reading in higher education, can exacerbate transition difficulties. Although dropping out might be inevitable for some students, it is not acceptable to the extent such attrition is due to weaknesses in the General Studies branch with regard to preparing students for higher education. I would claim that the comparisons between levels made above indicate that many students drop out because they are not properly prepared for higher education, among other factors due to inadequate English reading proficiency. I would also argue that this is a larger problem than commonly believed.

As a conclusion to this section I would like to underline that the inferences made and conclusions drawn above, based upon trends found in five convenience

samples, should be interpreted with some caution. Furthermore, to the extent I make implicit claims about causal relations, such as CLIL instruction changing how students read, this is a hypothesis only and must be verified in a separate study designed to isolate such a relation.

With regard to the study as a whole, the interpretations presented are, of course, fraught with some uncertainty. Not only is there great individual variation among the respondents, variables such as reading proficiency, the outcomes of school subjects, grades and motivation for a subject, and not to mention the propensity to continue to higher education. These are also complex phenomena that are deeply embedded in a social context. Nevertheless, I would argue that the trends and covariations found across five parallel descriptive studies give a sufficiently useful picture of how upper secondary EFL instruction prepares for higher education to indicate that changes in teaching and curricula are needed. Furthermore, it makes clear the need for a larger study comprising representative samples with both upper secondary and university level respondents, in addition to smaller studies designed to identify causal relations. In section 7.2 I will therefore suggest areas of further research.

## *7.2. Further research*

As mentioned above, the findings of this exploratory, descriptive study are sufficiently unflattering to indicate the need for a large scale, externally valid follow-up study to confirm or disprove these findings, in addition to several, smaller studies. My suggestions with regard to these studies follow below.

### 7.2.1. A major follow-up study

Based upon my experience carrying out the present study and my awareness of its limitations, I would start by suggesting a large-scale, follow-up survey designed to replicate these analyses and allow for external validity. This study should comprise representative samples of senior upper secondary as well as university level respondents, and use a test of Academic English reading proficiency such as the IELTS test.

The upper secondary level sample should comprise respondents from General Studies branch as well as from Supplementary Course classes. At the university level efforts should also be made to assure a representative sample comprising both beginner and advanced students. Given the difficulties of getting university level students to take part in a time consuming test, it might be necessary to settle for testing a limited number of respondents. As in the surveys presented in sections 5.2, 5.3, and 5.4, this could be compensated for by surveying an additional, larger sample using less time-consuming self-assessment items. Given the requirement that the respondents need to have experience reading English texts and textbooks in higher education, this sample should be large enough to allow respondents who do not have English texts on their reading lists to be excluded from statistical analysis. Otherwise, respondents would have to be screened with regard to their having English texts on their reading lists.

With regard to the test itself, I have already mentioned the need to use a test comparable to the IELTS Academic Reading Module, perhaps in combination with a properly designed test of vocabulary, in addition to a questionnaire developed on the basis of those used in the present study (see Appendices 2 and 3). I would also suggest including additional items designed to elicit information on reading strategies for both Norwegian and English, in particular to ascertain whether respondents read carefully for detailed information or are able to vary how they read at need, for instance for general understanding. Items on their handling of unfamiliar words as well as their tolerance of ambiguity and vagueness of meaning should also be included. Last, and very difficult given current rules for surveys, I would suggest including some form of identification to make it possible to contact selected respondents for interviews or further testing. My initial suggestion would be interviewing a number of respondents with low and high reading scores at both the upper secondary and university levels.

### 7.2.2. A second, large-scale study for Norwegian

Though Norwegian is not my subject, I would on the basis of my findings argue that an almost identical study of Norwegian reading proficiency as the one I described in 7.2.1 above is also needed. This would, of course, require finding or developing a test of academic reading in Norwegian comparable to the IELTS Academic Reading

Module used in the present study (see Appendix 4). A key goal should be ascertaining whether the observed differences between the upper secondary and university levels might be due to many beginner students not having developed the reading strategies needed for reading and learning from Norwegian textbooks. That this is an issue worth further investigation is certainly indicated by the findings of Bråten and Olaussen (1997), Fjeldbraaten (1999), two recent PISA surveys (Lie, Kjærnsli, Roe, & Turmoe, 2001; Kjærnsli, Lie, Olsen, Roe, & Turmoe, 2004), as well as by the data in the present study.

### 7.2.3. Causal studies

As has been mentioned above, the analysis of data in the present study has made clear the need for three studies designed to isolate causal relations.

The first would be a causal study of CLIL instruction at the upper secondary level. This would be to see whether, and to what extent this form of instruction develops vocabulary and reading proficiency, teaches respondents to vary their reading strategies, and improves their tolerance of ambiguity and vagueness in the meaning of unfamiliar words. With regard to research design, I would suggest using what Shadish, Cook, & Campbell (2002, p. 136) call an "untreated control group design with dependent pre and posttest samples." While the control groups would comprise respondents with EFL instruction only, I would suggest comparing these with single subject CLIL groups, and using IELTS or comparable tests as pretests and posttests for both types of groups. A separate vocabulary test, and questionnaire items designed to elicit information on reading strategies should also be included.

Second, a similar research design could be used to test whether the Advanced English Course does or does not develop the appropriate reading proficiency. In fact, it should be possible to examine this issue by using data from control groups in the CLIL study suggested above, of course depending upon sample size.

Third, and last, it should also be possible to run experiments with a number of EFL classes, for instance Advanced English Course groups, where the respondents are to read extensively, well in excess of the syllabus requirements, possibly accompanied by vocabulary development activities and reading strategy instruction and practice. This could comprise a research design including control groups and using pretests and posttests of reading proficiency. These studies could also serve to test the practicality

and efficacy of the changes in EFL instruction and syllabi that I suggest in Section 7.3 below.

To conclude this section I would suggest a project that would be of overall importance, and subsume the present study as well as the new studies suggested above. As mentioned in subsection 6.3.1, one of the findings of this study is the lack of consistency in the EFL syllabi and course requirements with regard to preparing for higher education. While this is specified as a target for the second and third year English classes, it is at the same time effectively undercut by the authorities not making any of these courses compulsory. I question whether this lack of focus on the role of the General Studies branch in preparing for higher education is only a problem for English. Could this apparent lack of awareness of what preparing for higher education requires with regard to levels of knowledge and skills be a problem for other subjects as well? This situation illustrates Takala & Sajavaara's (2000, p. 131) argument that "language policy and language planning should, more systematically than in the past, draw on the work of policy studies in general and forge closer links with evaluation." I would therefore argue for the Ministry of Education and Research initiating a comprehensive needs analysis study to determine what skills and subjects are necessary for the students to succeed in higher education. This could in turn be used to design a new curriculum for the General Studies branch. In fact, using a needs analysis as a point of departure when developing courses, curricula and syllabi is highly recommended (see for instance West 1994, 1997; Yalden, 1994).

## *7.3. Implications for Norwegian EFL instruction*

According to West (West, 1997, p. 73), a crucial aspect of a good and credible needs analysis is that the categories of needs arrived at should be "[r]elated to the target situation/real world – the categories of need should be related to the target situation." With regard to EFL and higher education I have argued above (see section 1.2) that "target situation needs" in Norwegian higher education at the minimum be defined as the level of reading proficiency, comprising the language knowledge and reading strategies needed to master the reading of the English texts and textbooks used in higher education. Recent developments, in particular the growing number of

international exchange and English medium programs engendered by the Quality Reform of Norwegian Higher Education (see UFD, 2004), have now introduced the need for advanced listening and writing skills as well.

Another requirement of a good needs analysis is that it takes "account of both (a) target-situation needs and (b) learner's present deficiencies" (West, 1997, p. 73). With the focus on reading proficiency I would therefore argue that the data in this study has shown that EFL syllabi are not consistent on the role of EFL instruction in preparing for higher education, and that all too many learners do not develop the required level of proficiency. In the following I will therefore base my suggestions for changes in Norwegian EFL instruction on the deficiencies I have identified. When doing so I have found it necessary to go beyond the data presented in this study to include primary and lower secondary school, this because upper secondary EFL instruction builds upon the ten years of teaching at the previous levels.

### 7.3.1. Implications for EFL instruction at the lower secondary level

As mentioned above, a recent European level survey of the English proficiency of 16-year-old lower-secondary students indicates that Norwegian lower-secondary students do well compared with their peers in other European countries (Bonnet, 2004; Ibsen, 2004). However, the study also shows that there is an extensive, in-class variation in the Norwegian respondents' scores that clearly indicates the need to further improve EFL instruction. Bonnet (2004) sums up the findings for Norway as follows:

> [Norwegian respondents] score high on the European test [including reading], but results show a relatively large standard variation and the distribution of results in each classroom is also considerable. The between school variance is about 13%, a relatively low value in an international perspective. Combined with the rather large overall spread this means there is a pronounced spread of English proficiency within classrooms. The data reveals a tremendous challenge for the Norwegian teachers of English (p.147).

Furthermore, the data in this study indicates that many Norwegian students at this level are under-stimulated by EFL instruction, in that they felt that they had learned "only half of what they know of English at school. . . [with] high results among the

students who do not think of school as their main source of English input" (Bonnet, 2004, p. 126).

For the primary as well as the lower secondary level I would therefore argue that the results of the European study reveal the need for a critical examination of the content and progression of Norwegian EFL instruction. With regard to reading skills, this would entail increased emphasis on extensive reading (Day & Bamford 1998, 2002; Simensen, 1998, pp. 162-173). The syllabus should also be made more explicit about the need to develop varied reading strategies, on vocabulary development, and on "teaching students not to despair in the face of unknown words but to accept ambiguity and vagueness in the early stages of the learning process" (Simensen, 2000b, p. 18, my translation). I would argue that these suggestions could lead to an overall improvement of the quality of EFL instruction at this level.[55] In addition, this will also provide a far better point of departure for EFL instruction at the upper secondary level with regard to preparing for higher education.

Concerning the need to support goals for learning with tests that promote the desired outcome, the new National Examinations now offer the opportunity to test English reading proficiency at a national level. I would assume the proposals I have made above with regard to reading will, as time goes by, be "encouraged" by these tests.

### 7.3.2. Implications for EFL instruction at the upper secondary level

At the upper secondary level, my first recommendation, based on my examination of the EFL syllabi, is to be more explicit about the role of the General Studies branch in preparing for higher education.

With regard to EFL instruction the first step in this process would be to re-examine the de-facto function of the English Foundation Course as "gatekeeper" to higher education. As discussed in subsection 2.2.6, preparing for higher education is not even mentioned in the syllabus for this course. Therefore, if this course is to continue as a minimum requirement for higher education, its de-facto function of preparing and qualifying for higher education should not only be stated specifically in

[55] With regard to dyslectics I would suggest replacing written with audio texts at need, such as recorded books and videos.

the syllabus, it should also be reflected in the requirements with regard to content, levels to be attained, and examinations.

Next, I would argue that the present study has made clear that current upper secondary EFL instruction, irrespective of course, has ample room for improvement with regard to the development of reading proficiency. My additional suggestions are therefore as follows:

- The first and most important change would be to increase the requirements for reading to a level that precludes careful reading for detailed understanding as the only form of reading in the EFL classroom. This requires putting strong emphasis on extensive reading, i.e. to develop vocabulary through incidental acquisition as well as reading fluency. Of course, the books chosen should be interesting for the students, and pleasure reading should be encouraged (Day & Bamford 1998, 2002; Simensen, 1998, pp. 162-173).
- Increased emphasis should be put on systematic vocabulary development, including teaching to accept ambiguity and vagueness due to unfamiliar vocabulary. Although this is important at all levels, it is particularly important to develop the right habits at lower levels.
- Developing information literacy in English should also be given priority – the accessing, processing, and critical evaluation of information from a wide variety of sources, both from "hardcopy" sources and the Internet. An example of a textbook that encourages such activities is mentioned in subsection 2.3.1 above.
- Widespread and systematic use of CLIL instruction in English in one or more subjects, taking care to use authentic textbooks from English speaking countries as much as possible. It should be seriously considered whether students who do not opt for one of the elective English courses should be required to take a CLIL course.
- Last, since in real life testing needs to support teaching, I would argue that current national examinations should be supplemented with reading tests comparable to for instance the IELTS Academic Reading Module. This could be done online, perhaps as part of the new National Test for English.

I believe that the findings of the present study offer support for these recommendations. I also consider them the logical outcome of accepting the role of upper secondary EFL instruction in preparing for higher education.

English texts and textbooks in higher education have been used in Norwegian higher education for decades. The ongoing introduction of English medium programs in higher education means that university level students will also need advanced English listening, oral, and writing skills. In addition, we have developments in the business world, where firms are increasingly using English as a working language. Last, students may now seek employment all over the world. These "facts on the ground" argue the need for providing students with higher levels of English proficiency than ever.

Therefore, rejecting these proposals out of hand in favor of the status quo, means accepting that EFL instruction in the General Studies branch either cannot, or should not, prepare for higher education or for employment in increasingly internationalized workplaces. This would probably require institutions of higher education to introduce preparatory, English for Academic Purposes modules for beginner students in higher education.

In conclusion, when evaluating the data in this study, I came to ponder the fate of the many students who apparently failed to make the transition to higher education. As a lecturer of English at the university level I have seen all-too-many new students who seem utterly unprepared for the requirements of higher education. Some quit, some muddle through, and some persevere despite tremendous difficulties. To the extent it is possible to avert such difficulties, personal tragedies even, by ensuring that the General Studies branch effectively does what it is supposed to do, among other things preparing for higher education, I would argue for doing so. If we do not, out of each new generation all-too-many students will pay for our sins – of omission.

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# 9. APPENDICES

## *9.1. APPENDIX 1*

This is the English version of questionnaire used in the pilot survey presented in Section 5.2 above. The survey version was in Norwegian. I have retained the original numbering in this version, though this proved unsuiTable for statistical processing.

**[No. _____] Name of study:**_____

Dear student!
This anonymous questionnaire is part of a research project investigating how Norwegian students experience the reading of course material in English. Your answers will be of great help when evaluating English instruction in upper secondary school.

Answer the questions as correctly as possible, and answer all of them to the best of your ability even though you are not quite certain that you remember correctly. If you feel that any

of the questions are difficult to understand or do not do justice to the topic, please note this down on the questionnaire.

Thank you for your help!

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## 1.0 QUESTIONS ABOUT YOUR STUDIES

**1.1** Except for Ex. Phil. or other preparatory courses, have you studied any other university level subjects? ☐ Yes ☐ No

**1.2** If yes, please indicate how many credits (1 Norwegian = 3 ECTS) (A Foundation Course equals 20 Norwegian credits (60 ECTS).

☐ 2-10 credits ☐ 21-30 credits ☐ 40 credits or more
☐ 11-20 credits ☐ 31-40 credits

**1.3** Were any of these credits in the subject English? ☐ Yes ☐ No

**1.4** If yes to 1.3, indicate how many English credits. _____

## 2.0 QUESTIONS ABOUT YOUR CURRENT COURSES/SUBJECTS.

**2.1** How much of your Norwegian course material have you read so far?
Please indicate in %. _____

**2.2** How much of your English course material have you read so far?
Please indicate in %. _____

**2.3** Indicate on a scale from 1 to 7 how you experience reading **your Norwegian course material**.

Impossible to read No problems
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

**2.4** Indicate on a scale from 1 to 7 to what **extent you find the contents of the Norwegian course material understandable.**

Nothing Everything
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

**2.5** Indicate on the scale from 1 to 7 how you experience reading **your English course material.**

Impossible to read No problems
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

**2.6** Indicate on a scale from 1 to 7 to what **extent you find the contents of the English course material understandable.**

Nothing Everything
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

## 3.0 QUESTIONS ABOUT YOUR READING OF ENGLISH COURSE MATERIAL

**3.1** Please tick the statement that best describes your reading of English course material. PLEASE READ ALL OF THE STATEMENTS FIRST. (Give only one answer)

- ☐ I do not understand the contents or find the text coherent when reading.
- ☐ I only manage to understand some of the main points of the text.
- ☐ I understand some of the details along with the main points of the text.
- ☐ I understand most of what I read
- ☐ I understand **all** of what I read.

If you feel that none of these categories relevant, or only partly relevant, please explain in your own words how you experience the reading of English course material (feel free to you the other side of the page):

**3.2** How fast do you read the English material compared to in Norwegian? (Give only one answer)

- ☐ Much slower than in Norwegian
- ☐ Slower than in Norwegian
- ☐ At the same speed as in Norwegian
- ☐ Faster than in Norwegian
- ☐ Much faster than in Norwegian

**3.3** Indicate what you find most difficult when reading English (Give only one answer)

- ☐ Unfamiliar words
- ☐ Difficult/complex sentences
- ☐ Dense presentation with a lot of information
- ☐ Understand the material as a coherent whole
- ☐ Understand the subject matter

**3.4** Please tick the statement that best describes how you read your English course material. (Give only one answer)

- ☐ I just read
- ☐ I read through it first before reading carefully.
- ☐ I underline or note down key words or important points.
- ☐ I sum up what I have read, in my mind or on paper.
- ☐ I take frequent pauses when reading to think about what I have read.

If you feel that none of these categories relevant, or only partly relevant, please explain in your own words how you experience the reading of English course material (feel free to you the other side of the page):

3.5 What do you usually do when you encounter unfamiliar words when reading? Rank on a scale from 1 (most important) to 7 (least important).

☐ Give up reading. ☐ Guess the meaning of the word from the reading context.
☐ Consult a dictionary. ☐ Guess the meaning of the word using my knowledge of the subject.
☐ Ask the lecturer. ☐ Ask other students.
☐ Continue reading.

If you feel that none of these categories relevant, or only partly relevant, please explain in your own words what you do to understand unfamiliar words (feel free to you the other side of the page):

3.6 Indicate on the scale from 1 to 7 how many words you do not understand in the **Norwegian** texts on your reading lists.

All the words are unfamiliar — All the words are familiar
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

3.7 Indicate on the scale from 1 to 7 how many words you do not understand in the **English** texts on your reading lists.

All the words are unfamiliar — All the words are familiar
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

3.8 Indicate on the scale from 1 to 7 to what extent you find the sentences in the **English** texts difficult to understand.

All sentences are impossible to understand — All the sentences are understandable
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

3.9 Indicate on the scale from 1 to 7 to what extent you do or do not understand the **English** texts because you are unfamiliar with the subject.

It is impossible to understand — Everything is understandable
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

**3.10** Indicate on the scale from 1 to 7 to what extent you find the **English** texts coherent when reading.

No coherence at all — I find all the texts are coherent
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

3.11 Indicate on the scale from 1 to 7 to what extent the information in the **English** texts is so densely presented that it hinders your understanding of the contents.

It is impossible to understand — Everything is understandable
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

3.12 Indicate on the scale from 1 to 7 to what extent you find the contents of the **English** texts understandable.

It is impossible to understand Everything is understandable

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

## 4.0 SOME QUESTIONS ABOUT YOUR BACKGROUND

**4.1** ☐ Male ☐ Female

**4.2** Is Norwegian your first language? ☐ Yes ☐ No

If no, which language? _____

4.3 In which county did you graduate from upper secondary or a comparable education? _____

4.4 If you graduated from upper secondary or a comparable education abroad, where was it? - _____

4.5 Which year did you graduate from upper secondary school or a comparable education? _____

4.6 Which of these subjects did you finish in your last year at upper secondary school, in Norway or abroad? (You may give several answers)

☐ Mathematics ☐ Social Studies
☐ Physics ☐ Economics
☐ Chemistry ☐ Business economics
☐ Biology ☐ Other:

## 5.0 SOME QUESTIONS ABOUT YOUR BACKGROUND IN ENGLISH

**5.1** Indicate your most advanced, upper secondary English course. (Give only one answer)

First year Foundation Course

☐ **5**-0-0 Foundation (also **2+2+1** – i.e. Vocational English with the Supplementary Course)

Second year

☐ 5-**3**-0 General English
☐ 5-**5**-0 English 1 (first year of the Advanced English Course)

Third year

☐ 5-5-**5** VK2 (the Advanced English Course)

If none of these categories are relevant, please indicate course:

_____

**5.2** How interested were you in English as a school subject?

☐ Very interested
☐ Interested
☐ Neutral
☐ Not interested
☐ Strongly disliked subject Other comments**:**

**5.3** What grade did your achieve in the most advanced English upper secondary course you completed? ____

**5.5** Have you received any other form of instruction in English from upper secondary school? (You may give several answers)

☐ Instruction in a non-language subject in English, for example History, Religion, or Physics?
☐ Schooling in an English speaking country (6 months or more)
☐ Have attended an English language upper secondary school, i.e. the. International Baccalaureate.

## 6.0 QUESTIONS ABOUT YOUR READING HABITS

**6.1** Ho many English novels have your read, at school or on your own?
Give the rough number: _____

**6.2** How often do you read English periodicals, magazines or newspapers? (Give only one answer)

| never | occasionally | monthly | weekly | daily |
|---|---|---|---|---|
| ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 |

**6.3** How often do you read English course material on the Internet? (Give only one answer)

| never | occasionally | monthly | weekly | daily |
|---|---|---|---|---|
| ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 |

**6.4** How often do you watch English movies, videos, or TV programs without Norwegian subtitling? (Give only one answer)

| never | occasionally | monthly | weekly | daily |
|---|---|---|---|---|
| ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 |

## 7.0 QUESTIONS ABOUT UPPER SECONDARY ENGLISH INTRUCTION

**7.1** Which skill did your English teacher put most emphasis on in the classroom? (Give only one answer)

☐ Writing ☐ Oral activities ☐ Equal emphasis on all four skills
☐ Reading ☐ Listening

**7.2** What were the main activities in your upper secondary English classes? Choose the three most important activities, and rank these from 1 (most important) til 3 (least important).

☐ reading in the textbook
☐ translation
☐ working with vocabulary
☐ working with grammar
☐ working with oral exercises
☐ working with writing tasks
☐ working with literature and civilization
☐ reading novels (class sets)
☐ reading novels you had chosen yourself
☐ searching and reading on the Internet

If you feel that none of these categories relevant, or only partly relevant, please describe your English classes in your own words (feel free to you the other side of the page):

**7.3** How often did you get to read novels in class?

| never | occasionally | monthly | weekly | every lesson |
|---|---|---|---|---|
| ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 |

**7.4** How often did you get to read novels you had chosen yourself?

| never | occasionally | monthly | weekly | every lesson |
|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 |

**7.5** How often did you get to read English magazines or newspapers?

| never | occasionally | monthly | weekly | every lesson |
|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 |

**7.6** How often did you use the Internet in English class?

| never | occasionally | monthly | weekly | every lesson |
|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 |

**7.7** How often did you write in English class?

| never | occasionally | monthly | weekly | every lesson |
|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 |

**7.8** Were you taught how to handle difficult texts?
☐ Yes ☐ no

**7.9** If you answered yes to question **7.8**, please describe how and what your were taught? (Feel free to use the other side of the page):

## 8.0 OTHER COMMENTS:

If you have any comments you wish to make about the questionnaire, or that you wish to mention in connection with his survey, please write it below (feel free to you the other side of the page):

## *9.2. APPENDIX 2*

This is the English version of questionnaire used in the pilot survey presented in sections 5.3 and 5.4 above. The survey version was in Norwegian, and in Section 5.4 it was used together with the IELTS Academic Reading Module in Appendix 4.

**1. [No. _____]**

Dear student!
This anonymous questionnaire is part of a research project investigating how Norwegian students experience the reading of course material in English. Your answers will be of great help when evaluating English instruction in upper secondary school.

Answer the questions as correctly as possible, and answer all of them to the best of your ability even though you are not quite certain that you remember correctly.

Thank you for your help!

Stipendiat Glenn Ole Hellekjær g.o.hellekjar@ils.uio.no
Institutt for lærerutdanning og skoleutvikling

2. Which subject (s) are you studying at present?

3. At which department and faulty are you studying?

4. At which university/college are you studying?

## SOME QUESTIONS ABOUT YOUR BACKGROUND

5. ☐ Male ☐ Female

6. Is Norwegian your mother tongue? ☐ Yes ☐ No

7. If no to 6, please state which language _____

8. In which Norwegian county (fylke) did you graduate from upper secondary or a comparable education?

9. If you graduated from upper secondary or a comparable education abroad, where was it?

10. Which year did you graduate from upper secondary school or a comparable education?

Which of these Advanced subjects did you finish in your final year at upper secondary school, in Norway or abroad? (You may give several answers)

12. ☐ Mathematics
13. ☐ Physics
14. ☐ Chemistry
15. ☐ Biology
16. ☐ Social Studies
17. ☐ Economics
18. ☐ Business Economics
19. ☐ English
20. ☐ French
21. ☐ German
22. ☐ Other:

If none of these categories are relevant, please describe course:

## SOME QUESTIONS ABOUT YOUR BACKGROUND IN ENGLISH

23. Indicate your most advanced, upper secondary English course. (Give only one answer)

First year Foundation Course

☐ **5**-0-0 Foundation (also **2+2+1** – i.e. Vocational English with the Supplementary Course)

Second year

☐ 5-**3**-0 or 5-**5**-0 General English or the first year of the Advanced English Course

Third year

☐ 5-5-**5** VK2 (the Advanced English Course)

If none of these categories are relevant, please indicate course:

_____

24. What grade did your achieve in the most advanced upper secondary course you completed?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

25. How interested were you in English as a school subject?

Not interested at all — Very interested

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

Have you received any other form of instruction in English from upper secondary school? (You may give several answers)

26. ☐ Instruction in a non-language subject, for example History or Religion in English?

27. ☐ Schooling in an English speaking country (6 months or more)

28. ☐ Attended an English language upper secondary school, i.e. the. International Baccalaureate.

## QUESTIONS ABOUT YOUR STUDIES

29. Except for Ex. Phil. or other preparatory courses, please indicate how many credits (1 Norwegian = 3 ECTS) (A Foundation Course equals 20 Norwegian credits = 60 ECTS).

☐ no credits ☐ 11-20 credits ☐ 31-40 credits
☐ 2-10 credits ☐ 21-30 credits ☐ 40 credits or more

30. Were any of these credits in the subject English? ☐Yes ☐No

31. If yes to **30**, please indicate how many credits?

☐ 2-10 credits ☐21-30 credits ☐ 40 credits or more
☐11-20 credits ☐ 31-40 credits

32 . How much of your **Norwegian** course material on your reading list have you read so far?

☐ no Norwegian texts ☐ very little **(<10%)** ☐ some **(10-39%)**
☐ about half **(40-59%)** ☐ most of it **(60-99%)** ☐ all of it **(100%)**

33. How much of your **English** course material on your reading list have you read so far??

☐ no English texts ☐ very little **(<10%)** ☐ some **(10-39%)**
☐ about half **(40-59%)** ☐ most of it **(60-99%)** ☐ all of it **(100%)**

## QUESTIONS ABOUT YOUR READING OF NORWEGIAN COURSE MATERIAL

(Even if you have no Norwegian texts on your reading list this year, please base your answers to the questions about reading on your experience from other courses and subjects)

34. How **quickly** do you **read Norwegian** texts on your reading lists? (Give only one answer)

Very slowly — Quickly and easily

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

35. Indicate on the scale from 1 to 7 **how many words you do not understand** in the **Norwegian** texts on your reading lists.

All the words are unfamiliar — All the words are familiar

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

36. Indicate on the scale from 1 to 7 to what extent you find the **sentences in the Norwegian texts** difficult to understand.

All sentences are impossible to understand — All sentences are understandable

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

37. Indicate on the scale from 1 to 7 to what extent you **find the Norwegian texts coherent** when reading.

No coherence at all — All texts are coherent

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

38. Indicate on the scale from 1 to 7 to what extent **information in the Norwegian texts is so densely presented** that it hinders your understanding of the contents.

Impossible to understand — Everything is understandable

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

39. Indicate on the scale from 1 to 7 to what extent you find **the contents of the Norwegian texts understandable**.

Impossible to understand — Everything is understandable

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

## QUESTIONS ABOUT YOUR READING OF ENGLISH COURSE MATERIAL

40. How **quickly** do you **read English** texts on your reading lists? (Give only one answer)

Very slowly — Quickly and easily

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

41. Indicate on the scale from 1 to 7 **how many words you do not understand** in the **English** texts on your reading lists.

All the words are unfamiliar — All the words are familiar

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

42. Indicate on the scale from 1 to 7 to which extent you find the **sentences in the English texts** difficult to understand.

All sentences are impossible to understand — All sentences are understandable

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

43. Indicate on the scale from 1 to 7 to which extent you **find the English texts coherent** when reading.

No coherence at all — All texts are coherent

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

44. Indicate on the scale from 1 to 7 to which degree **information in the English texts is so densely presented** that it hinders your understanding of the contents.

Impossible to understand Everything is understandable
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

45. Indicate on the scale from 1 to 7 to which extent you find **the contents of the English texts understandable**.

Impossible to understand Everything is understandable
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

## QUESTIONS ABOUT HOW YOU READ

Tick on the scale to what extent you use the ways of reading described in the questions below when reading your English course material. (Give only one answer per question)

46. I read straight through the text.

Little used Much used
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

47. I read through it first before reading carefully.

Little used Much used
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

48. I underline or note down key words or important points.

Little used Much used
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

49. I sum up what I have read, in my mind or in writing.

Little used Much used
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

50. I take frequent pauses when reading to think about what I have read.

Little used Much used
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

If you feel that none of these categories relevant, or only partly relevant, please explain in your own words how you experience the reading of English course material (feel free to you the other side of the page):

## SOME QUESTIONS ABOUT HOW YOU HANDLE UNFAMILIAR ENGLISH WORDS

What do you usually do when you encounter unfamiliar words when reading? Indicate on the scale how often you use the proposed solution. (give only one answer per question).

51. Consult a dictionary

| Never | | | | | | Very often |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

Guess the meaning of the word using my knowledge of the subject.

| Never | | | | | | Very often |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

53. Guess the meaning of the word from the reading context.

| Never | | | | | | Very often |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

54. Ask the lecturer.

| Never | | | | | | Very often |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

55. Ask other students.

| Never | | | | | | Very often |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

56. Continue reading.

| Never | | | | | | Very often |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

57. Give up reading.

| Never | | | | | | Very often |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

If no category is suitable, describe in your own words what you do to find out the meaning of unfamiliar words (feel free to use the other side of the page):

## QUESTIONS ABOUT YOUR READING HABITS

58. How many English novels have your read, at school or on your own?

| None | 1-5 | 6-10 | 11-15 | 16-20 | 21-50 | 51 or more |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

59. How often do you read English books? (Give only one answer)

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

60. How often do you read English periodicals, magazines or newspapers? (Give only one answer)

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|

☐1 ☐2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐7

61. How often do you read English on the Internet? (Give only one answer)

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

62. How often do you watch English movies, videos, or TV programs without Norwegian subtitling?

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

## QUESTIONS ABOUT YOUR ENGLISH CLASSES AT UPPER SECONDARY SCHOOL

What were the main activities in your upper secondary English classes? Answer each question by ticking on the scale from 1 (never) to 7 (every lesson). (Give only one answer per question).

63. Working with translation

Never every lesson
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

64. Working with vocabulary and vocabulary tasks

Never every lesson
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

65. Working with grammar.

Never every lesson
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

66. Working with oral activities.

Never every lesson
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

67. Working with writing tasks/writing texts.

Never every lesson
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

68. Working with literature and background topics.

Never every lesson
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

69. Reading and searching for information on the Internet.

Never every lesson
☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

70. Writing e-mail, or chatting on the Internet.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

71. Reading in the textbook.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

72. Reading novels in class sets.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

73. Reading self-selected novels

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

74. Reading English periodicals, magazines and newspapers.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

If activities from your English class have not been mentioned, please describe them in your own words below: (feel free to use the other side of the page)

**75. Other comments:** If you have any comments to the questionnaire, or want to add something in connection with this survey, please write this below: (feel free to use the other side of the page)

## *9.3. APPENDIX 3*

This is the English version of questionnaire used in the pilot survey presented in sections 5.5 and 5.6 above. The survey was in Norwegian, and these questionnaires were used together with the IELTS Academic Reading Module in Appendix 4.

**QUESTIONNAIRE ABOUT YOU AND YOUR BACKGROUND IN ENGLISH**

1. [NO. _____]

2. The name of your school :_____

3. Which course of study are you attending?
   - ☐ The General Studies branch
   - ☐ Music, Dance & Drama, or Athletics on the General Studies branch.
   - ☐ The Supplementary Course
   - ☐ International Baccalaureate (IB)

## SOME QUESTIONS ABOUT YOUR BACKGROUND

4. ☐ Male ☐ Female

5. Is Norwegian your mother tongue? ☐ Yes ☐ No

6. This question has been deleted.

7. Do you speak English at home? ☐ Yes ☐ No

8. If you speak English at home, please indicate how much in percent: _____%

Which of these advanced subjects did you finish in your final year of upper secondary school, in Norway or abroad? (You may give several answers)

9. ☐ Mathematics
10. ☐ Physics
11. ☐ Chemistry
12. ☐ Biology
13. ☐ Social Studies
14. ☐ Economics
15. ☐ Business Economic
16. ☐ English
17. ☐ French
18. ☐ German
19. ☐ Other:

If none of these categories are relevant, please indicate course: _____

20. Do you intend to go on to higher education? ☐ Yes ☐ No

21. If yes to 20, what study(ies)?
(You may give several answers) _____

22. Do you intend to study outside Norway? (Give only one answer)
☐ No ☐ Yes, in an English speaking country ☐ Yes, in a non-English speaking country

## SOME QUESTIONS ABOUT YOUR BACKGROUND IN ENGLISH

23. Indicate your most advanced, upper secondary English course. (Give only one answer)

First year Foundation Course

☐ **5**-0-0 Foundation (also **2+2+1** – i.e. Vocational English with the Supplementary Course)

Second year

☐ 5-**3**-0 or 5-**5**-0 General English or the first year of the Advanced English Course

Third year

☐ 5-5-**5** VK2 (the Advanced English Course)

If none of these categories are relevant, please indicate course:

_____

24. What grade did your achieve in the most advanced upper secondary course you completed? Give the grade from the fall term if you have English this year. (Give only one answer)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

25. How interested were you in English as a school subject?

Not interested Very

| at all | | | | | | interested |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

Do you have other forms of instruction in English or a special background in the language? (you may give several answers)

26 ☐ I have no special English background.

27 ☐ One of both of my parents are speakers of English as their first language.

28. ☐ I have had instruction in a non-language subject, for example History, Religion or Physics in English.

29. ☐ I have had schooling in an English speaking country (6 months or more)

30. ☐ I have attended an English language upper secondary school, i.e. the. International Baccalaureate.

31. ☐ I have a different background in English. (Please describe)_____

## QUESTIONS ABOUT YOUR ENGLISH READING HABITS

**32. How many English novels have your read, at school or on your own?**

| None | 1-5 | 6-10 | 11-15 | 16-20 | 21-50 | 51 or more |
|---|---|---|---|---|---|---|
| ☐ 1 | ☐2 | ☐3 | ☐4 | ☐5 | ☐ 6 | ☐7 |

33. How often do you read English books? (Give only one answer)

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

34. How often do you read English periodicals, magazines or newspapers? (Give only one answer)

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

35. How often do you read English on the Internet? (Give only one answer)

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

36. How often do you watch English movies, videos, or TV programs without Norwegian subtitling?

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

37. How many English books is there in your home? (Give only one answer)

| None | 1-10 | 11-50 | 51-100 | 100-250 | 251-500 | more than 500 |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

38. In the boxes below you will find descriptions of different levels of reading proficiency, Please read through all of them, and then tick in front of the box that best describes your level of **English** reading proficiency. (Give only one answer)

| | |
|---|---|
| A1 | I can read and understand common names, words, and very simple sentences, for instance on bulletins, posters, or in catalogues. |
| A2 | I can read short and simple texts. I can find the information I need in everyday texts such as advertisements, descriptions, menus, and timetables. I can understand short and simple personal letters. |
| B1 | I can read and understand texts in everyday language at home or at work. I can understand descriptions of events, feelings, and wishes in personal letters. |
| B2 | I can read articles and reports about current topics and events where the writer is expressing a point of view or an attitude. I can understand modern literary texts. |
| C1 | I can understand long and complicated factual or literary texts and notice differences in style. I can understand specialized articles and long articles from subject areas I am not familiar with or interested in. |
| C2 | I can with little effort read and understand almost all kinds of written texts, even abstract texts with a complicated structure and language, such as in manuals, specialized articles, or works of literature. |

These are questions about the difficulties you experience when you read **English novels, textbooks, newspapers, or magazines.**

| Give only one answer on the scale from 1 to 7 per question about your reading of **English** texts. ---> | | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|---|---|---|---|---|---|---|---|---|
| **39** | How **quickly** do you **read English** texts? | 1-Very slowly | 2 | 3 | 4 | 5 | 6 | 7- Quickly and easily |
| **40** | **How many words do you understand** in **English** texts? | 1- All are unfamiliar | 2 | 3 | 4 | 5 | 6 | 7- All are familiar |
| **41** | To what extent you find the **sentences in the English texts** difficult to understand? | 1- All are impossible to understand | 2 | 3 | 4 | 5 | 6 | 7- All are understand-able |
| **42** | Do you **find the English texts coherent** when reading? | 1- No coherence at all | 2 | 3 | 4 | 5 | 6 | 7- All texts are coherent |
| **43** | To what extent is the **information in the English texts is so densely presented** that it hinders your understanding of the contents? | 1- Impossible to understand | 2 | 3 | 4 | 5 | 6 | 7- Everything is understand-able |
| **44** | To what extent do you find **the contents of the English texts understandable**? | 1-Impossible to understand | 2 | 3 | 4 | 5 | 6 | 7- Everything is understand-able |

## QUESTIONS ABOUT YOUR NORWEGIAN READING HABITS

45. How often do you read Norwegian books? (Give only one answer)

several times several hours

| Never | sometimes | monthly | weekly | weekly | daily | daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

46. How often do you read **Norwegian** periodicals, magazines or newspapers? (Give only one answer)

| Never | sometimes | monthly | weekly | several times weekly | daily | several hours daily |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

47. How many Norwegian books are there at your home? (Give only one answer)

| None | 1-10 | 11-50 | 51-100 | 01-250 | 251-500 | more than 500 |
|---|---|---|---|---|---|---|
| ☐1 | ☐2 | ☐ 3 | ☐ 4 | ☐ 5 | ☐ 6 | ☐7 |

48. In the boxes below you will find descriptions of different levels of reading proficiency, Please read through all of them, and then tick in front of the box that best describes your level of **Norwegian** reading proficiency. (Give only one answer)

| | |
|---|---|
| A1 | I can read and understand common names, words, and very simple sentences, for instance on bulletins, posters, or in catalogues. |
| A2 | I can read short and simple texts. I can find the information I need in everyday texts such as advertisements, descriptions, menus, and timetables. I can understand short and simple personal letters. |
| B1 | I can read and understand texts in everyday language at home or at work. I can understand descriptions of events, feelings, and wishes in personal letters. |
| B2 | I can read articles and reports about current topics and events where the writer is expressing a point of view or an attitude. I can understand modern literary texts. |
| C1 | I can understand long and complicated factual or literary texts and notice differences in style. I can understand specialized articles and long articles from subject areas I am not familiar with or interested in. |
| C2 | I can with little effort read and understand almost all kinds of written texts, even abstract texts with a complicated structure and language, such as in manuals, specialized articles, or works of literature. |

These are questions bout the difficulties you experience when you read **Norwegian novels, textbooks, newspapers, or magazines.**

| Give only one answer on the scale from 1 to 7 per question about your reading of **Norwegian** texts. ---> | | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|---|---|---|---|---|---|---|---|---|
| **49** | How **quickly** do you **read Norwegian** texts? | 1-Very slowly | 2 | 3 | 4 | 5 | 6 | 7- Quickly and easily |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **40** | **How many words do you understand** in **Norwegian** texts? | 1- All are unfamiliar | 2 | 3 | 4 | 5 | 6 | 7- All are familiar |
| **51** | To what extent you find the **sentences in the Norwegian texts** difficult to understand? | 1- All are impossible to understand | 2 | 3 | 4 | 5 | 6 | 7- All are understand-able |
| **52** | Do you **find the Norwegian texts coherent** when reading? | 1- No coherence at all | 2 | 3 | 4 | 5 | 6 | 7- All texts are coherent |
| **53** | To what extent is the **information in the Norwegian texts is so densely presented** that it hinders your understanding of the contents? | 1- Impossible to understand | 2 | 3 | 4 | 5 | 6 | 7- Everything is understand-able |
| **54** | To what extent do you find **the contents of the Norwegian texts understandable**? | 1-Impossible to understand | 2 | 3 | 4 | 5 | 6 | 7- Everything is understand-able |

## SOME QUESTIONS ABOUT HOW YOU HANDLE UNFAMILIAR ENGLISH WORDS

What do you usually do when you encounter unfamiliar words when reading English novels, textbooks, magazines and newspapers, or on the Internet? Indicate on the scale how often you use the proposed solution. (give only one answer per question).

55. Consult a dictionary

Never Very often

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

56. Guess the meaning of the word using my knowledge of the subject.

Never Very often

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

57. Guess the meaning of the word from the reading context.

Never Very often

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

58. Ask a teacher.

Never Very often

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

59. Ask my parents.

Never Very often

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

60. Ask other students.

Never Very often

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

61. Continue reading.

Never Very often

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

62. Give up reading.

Never Very often

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

## QUESTIONS ABOUT YOUR ENGLISH CLASSES

What were/are the main activities in your upper secondary English classes, now or the last year you had the subject? Answer each question by ticking on the scale from 1 (never) to 7 (every lesson). (Give only one answer per question).

63. Working with translation

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

64. Working with vocabulary and vocabulary tasks

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

65. Working with grammar.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

66. Working with oral activities.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

67. Working with writing tasks/writing texts.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

68. Working with literature and background topics.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

69. Reading and searching for information on the Internet.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

70. Writing e-mail, or chatting on the Internet.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

71. Reading in the textbook.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

72. Reading novels in class sets.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

73. Reading self-selected novels

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

74. Reading English periodicals, magazines and newspapers.

Never every lesson

☐ 1 ☐2 ☐3 ☐4 ☐5 ☐ 6 ☐7

If activities from your English class have not been mentioned, please describe them in your own words below: (feel free to use the other side of the page)

ON THE NEXT PAGES YOU WILL FIND THE READING TEST. PLEASE UNDERLINE UNFAMILIAR WORDS WHILE READING. YOU ARE TO WRITE YOUR ANSWERS IS ON THE LAST PAGE. YOU ARE FREE TO READ THE ENTIRE TEXT BEFORE ANSWERING, AND TO MOVE BACK AND FORTH IN THE TEST AS NEEDED.

## 9.4. APPENDIX 4



IELTS SPECIMEN MATERIALS - ACADEMIC READING

# INTERNATIONAL ENGLISH LANGUAGE TESTING SYSTEM

## SPECIMEN MATERIALS

## ACADEMIC READING

**TIME ALLOWED: 1 hour**
**NUMBER OF QUESTIONS: 38**

**Instructions**

**ALL ANSWERS MUST BE WRITTEN ON THE ANSWER SHEET**

The test is divided as follows:

| | | |
|---|---|---|
| -- | Reading Passage 1 | Questions 1 – 11 |
| -- | Reading Passage 2 | Questions 12 – 25 |
| -- | Reading Passage 3 | Questions 26 – 38 |

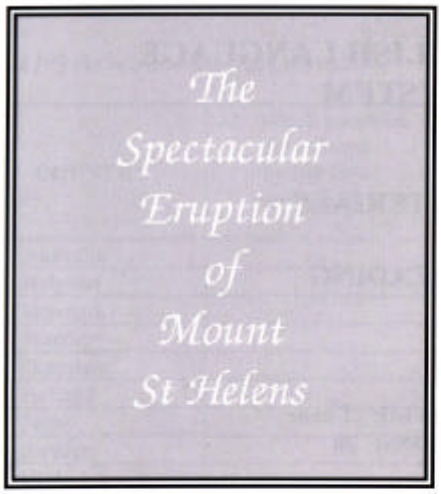
Start at the beginning of the test and work through it. You should answer all questions.
If you cannot do a particular question leave it and go on to the next. You can return to it later.



University of Cambridge Local Examinations Syndicate
The British Council
IDP Education Australia

## READING PASSAGE 1

*You should spend about 20 minutes on* ***Questions 1-11*** *which are based on Reading Passage 1 on pages 10 and 11.*




**A** The eruption in May 1980 of Mount St. Helens, Washington State, astounded the world with its violence. A gigantic explosion tore much of the volcano's summit to fragments; the energy released was equal to that of 500 of the nuclear bombs that destroyed Hiroshima in 1945.

**B** The event occurred along the boundary of two of the moving plates that make up the Earth's crust. They meet at the junction of the North American continent and the Pacific Ocean. One edge of the continental North American plate over-rides the oceanic Juan de Fuca micro-plate, producing the volcanic Cascade range that includes Mounts Baker, Rainier and Hood, and Lassen Peak as well as Mount St. Helens.

**C** Until Mount St. Helens began to stir, only Mount Baker and Lassen Peak had shown signs of life during the 20th century. According to geological evidence found by the United States Geological Survey, there had been two major eruptions of Mount St. Helens in the recent (geologically speaking) past: around 1900B.C., and about A.D.1500. Since the arrival of Europeans in the region, it had experienced a single period of spasmodic activity, between 1831 and 1857. Then, for more than a century, Mount St. Helens lay dormant.

**D** By 1979, the Geological Survey, alerted by signs of renewed activity, had been monitoring the volcano for 18 months. It warned the local population against being deceived by the mountain's outward calm, and forecast that an eruption would take place before the end of the century. The inhabitants of the area did not have to wait that long. On March 27, 1980, a few clouds of smoke formed above the summit, and slight tremors were felt. On the 28th, larger and darker clouds, consisting of gas and ashes, emerged and climbed as high as 20,000 feet. In April a slight lull ensued, but the volcanologists remained pessimistic. Then, in early May, the northern flank of the mountain bulged, and the summit rose by 500 feet.

**E** Steps were taken to evacuate the population. Most - campers, hikers, timber-cutters - left the slopes of the mountain. Eighty-four-year-old Harry Truman, a holiday lodge owner who had lived there for more than 50 years, refused to be evacuated, in spite of official and private urging. Many members of the public, including an entire class of school children, wrote to him, begging him to leave. He never did.

**F** On May 18, at 8.32 in the morning, Mount St. Helens blew its top, literally. Suddenly, it was 1300 feet shorter than it had been before its growth had begun. Over half a cubic mile of rock had disintegrated. At the same moment, an earthquake with an intensity of 5 on the Richter scale was recorded. It triggered an avalanche of snow and ice, mixed with hot rock - the entire north face of the mountain had fallen away. A wave of scorching volcanic gas and rock fragments shot horizontally from the volcano's riven flank, at an inescapable 200 miles per hour. As the sliding ice and snow melted, it touched off devastating torrents of mud and debris, which destroyed all life in their path. Pulverised rock climbed as a dust cloud into the atmosphere. Finally, viscous lava, accompanied by burning clouds of ash and gas, welled out of the volcano's new crater, and from lesser vents and cracks in its flanks.

**G** Afterwards, scientists were able to analyse the sequence of events. First, magma - molten rock - at temperatures above 2000°F had surged into the volcano from the Earth's mantle. The build-up was accompanied by an accumulation of gas, which increased as the mass of magma grew. It was the pressure inside the mountain that made it swell. Next, the rise in gas pressure caused a violent decompression, which ejected the shattered summit like a cork from a shaken soda bottle. With the summit gone, the molten rock within was released in a jet of gas and fragmented magma, and lava welled from the crater.

**H** The effects of the Mount St. Helens eruption were catastrophic. Almost all the trees of the surrounding forest, mainly Douglas firs, were flattened, and their branches and bark ripped off by the shock wave of the explosion. Ash and mud spread over nearly 200 square miles of country. All the towns and settlements in the area were smothered in an even coating of ash. Volcanic ash silted up the Columbia River 35 miles away, reducing the depth of its navigable channel from 40 feet to 14 feet, and trapping sea-going ships. The debris that accumulated at the foot of the volcano reached a depth, in places, of 200 feet.

**I** The eruption of Mount St. Helens was one of the most closely observed and analysed in history. Because geologists had been expecting the event, they were able to amass vast amounts of technical data when it happened. Study of atmospheric particles formed as a result of the explosion showed that droplets of sulphuric acid, acting as a screen between the Sun and the Earth's surface, caused a distinct drop in temperature. There is no doubt that the activity of Mount St. Helens and other volcanoes since 1980 has influenced our climate. Even so, it has been calculated that the quantity of dust ejected by Mount St. Helens - a quarter of a cubic mile - was negligible in comparison with that thrown out by earlier eruptions, such as that of Mount Katmai in Alaska in 1912 (three cubic miles). The volcano is still active. Lava domes have formed inside the new crater, and have periodically burst. The threat of Mount St. Helens lives on.

*Questions 1 and 2*

Reading Passage 1 has nine paragraphs labelled **A-I**.

*Write the appropriate letters **A-I** in boxes 1 and 2 on your answer sheet.*

| *Example* | *Answer* |
|---|---|
| Which paragraph compares the eruption to the energy released by nuclear bombs? | **A** |

**1** Which paragraph describes the evacuation of the mountain?

**2** Which paragraph describes the moment of the explosion of Mount St. Helens?

*Questions 3 and 4*

**3** What were the dates of the **TWO** major eruptions of Mount St. Helens before 1980?

*Write **TWO** dates in box 3 on your answer sheet.*

**4** How do scientists know that the volcano exploded around the two dates above?

*Using **NO MORE THAN THREE WORDS**, write your answer in box 4 on your answer sheet.*

*Questions 5 - 8*

*Complete the summary below.*

*Choose **NO MORE THAN THREE WORDS** from the passage for each answer.*

*Write your answers in boxes 5-8 on your answer sheet.*

In 1979 the Geological Survey warned ... **5** ... to expect a violent eruption before the end of the century. The forecast was soon proved accurate. At the end of March there were tremors and clouds formed above the mountain. This was followed by a lull, but in early May the top of the mountain rose by ... **6** ... . People were ... **7** ... from around the mountain. Finally, on May 18th at ... **8** ..., Mount St. Helens exploded.

## READING PASSAGE 2

*You should spend about 20 minutes on* ***Questions 12-25*** *which are based on Reading Passage 2 on page 15.*

*Questions 12 - 16*

Reading Passage 2 has seven paragraphs **A-G**.

*Choose the most suitable headings for paragraphs* ***B-E*** *and* ***G*** *from the list of headings below.*

*Write the appropriate numbers* ***(i-x)*** *in boxes 12-16 on your answer sheet.*

**List of Headings**

| | |
|---|---|
| **i** | The effect of changing demographics on organisations |
| **ii** | Future changes in the European workforce |
| **iii** | The unstructured interview and its validity |
| **iv** | The person-skills match approach to selection |
| **v** | The implications of a poor person-environment fit |
| **vi** | Some poor selection decisions |
| **vii** | The validity of selection procedures |
| **viii** | The person-environment fit |
| **ix** | Past and future demographic changes in Europe |
| **x** | Adequate and inadequate explanations of organisational failure |

| | | |
|---|---|---|
| *Example* | Paragraph **A** | *Answer* **x** |
| **12** | Paragraph **B** | |
| **13** | Paragraph **C** | |
| **14** | Paragraph **D** | |
| **15** | Paragraph **E** | |
| *Example* | Paragraph **F** | *Answer* **ix** |
| **16** | Paragraph **G** | |

## PEOPLE AND ORGANISATIONS: THE SELECTION ISSUE

**A** In 1991, according to the Department of Trade and Industry, a record 48,000 British companies went out of business. When businesses fail, the post-mortem analysis is traditionally undertaken by accountants and market strategists. Unarguably organisations do fail because of undercapitalisation, poor financial management, adverse market conditions etc. Yet, conversely, organisations with sound financial backing, good product ideas and market acumen often underperform and fail to meet shareholders' expectations. The complexity, degree and sustainment of organisational performance requires an explanation which goes beyond the balance sheet and the "paper conversion" of financial inputs into profit making outputs. A more complete explanation of "what went wrong" necessarily must consider the essence of what an organisation actually is and that one of the financial inputs, the most important and often the most expensive, is *people*.

**B** An organisation is only as good as the people it employs. Selecting the right person for the job involves more than identifying the essential or desirable range of skills, educational and professional qualifications necessary to perform the job and then recruiting the candidate who is most likely to possess these skills or at least is perceived to have the ability and predisposition to acquire them. This is a purely person/skills match approach to selection.

**C** Work invariably takes place in the presence and/or under the direction of others, in a particular organisational setting. The individual has to "fit" in with the work environment, with other employees, with the organisational climate, style of work, organisation and culture of the organisation. Different organisations have different cultures (Cartwright & Cooper, 1991;1992). Working as an engineer at British Aerospace will not necessarily be a similar experience to working in the same capacity at GEC or Plessey.

**D** Poor selection decisions are expensive. For example, the costs of training a policeman are about £20,000 (approx. US$30,000). The costs of employing an unsuitable technician on an oil rig or in a nuclear plant could, in an emergency, result in millions of pounds of damage or loss of life. The disharmony of a poor person-environment fit (PE-fit) is likely to result in low job satisfaction, lack of organisational commitment and employee stress, which affect organisational outcomes i.e. productivity, high labour turnover and absenteeism, and individual outcomes i.e. physical, psychological and mental well-being.

**E** However, despite the importance of the recruitment decision and the range of sophisticated and more objective selection techniques available, including the use of psychometric tests, assessment centres etc., many organisations are still prepared to make this decision on the basis of a single 30 to 45 minute unstructured interview. Indeed, research has demonstrated that a selection decision is often made within the first four minutes of the interview. In the remaining time, the interviewer then attends exclusively to information that reinforces the initial "accept" or "reject" decision. Research into the validity of selection methods has consistently demonstrated that the unstructured interview, where the interviewer asks any questions he or she likes, is a poor predictor of future job performance and fares little better than more controversial methods like graphology and astrology. In times of high unemployment, recruitment becomes a "buyer's market" and this was the case in Britain during the 1980s.

**F** The future, we are told, is likely to be different. Detailed surveys of social and economic trends in the European Community show that Europe's population is falling and getting older. The birth rate in the Community is now only three-quarters of the level needed to ensure replacement of the existing population. By the year 2020, it is predicted that more than one in four Europeans will be aged 60 or more and barely one in five will be under 20. In a five-year period between 1983 and 1988 the Community's female workforce grew by almost six million. As a result, 51% of all women aged 14 to 64 are now economically active in the labour market compared with 78% of men.

**G** The changing demographics will not only affect selection ratios. They will also make it increasingly important for organisations wishing to maintain their competitive edge to be more responsive and accommodating to the changing needs of their workforce if they are to retain and develop their human resources. More flexible working hours, the opportunity to work from home or job share, the provision of childcare facilities etc., will play a major role in attracting and retaining staff in the future.

*Questions 17 - 22*

Do the following statements agree with the views of the writer in Reading Passage 2?

*In boxes 17-22 on your answer sheet write*

| | |
|---|---|
| ***YES*** | *if the statement agrees with the views of the writer* |
| ***NO*** | *if the statement does not agree with the views of the writer* |
| ***NOT GIVEN*** | *if there is no information about this in the passage* |

**17** Organisations should recognise that their employees are a significant part of their financial assets.

**18** Open-structured 45 minute interviews are the best method to identify suitable employees.

**19** The rise in the female workforce in the European Community is a positive trend.

**20** Graphology is a good predictor of future job performance.

**21** In the future, the number of people in employable age groups will decline.

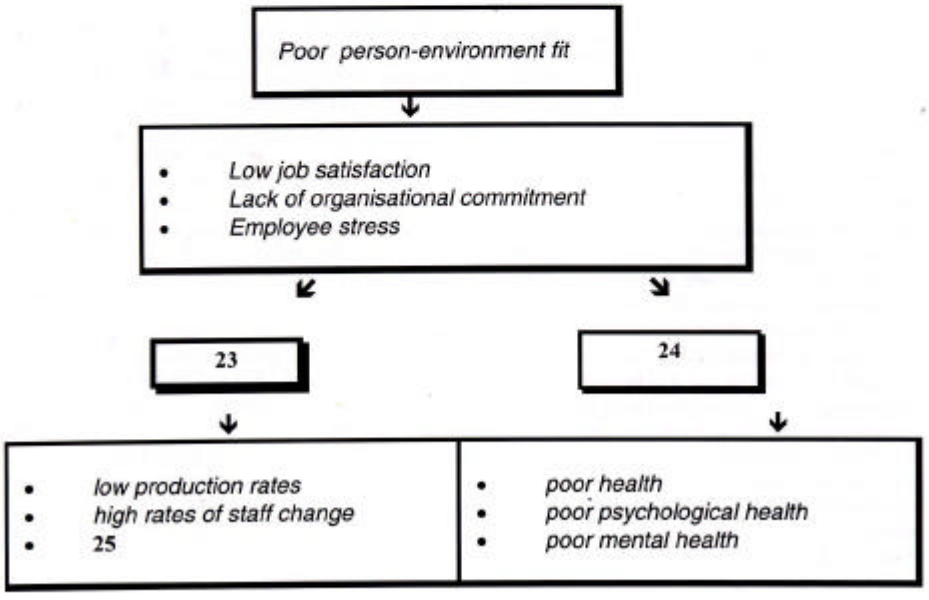
**22** In 2020, the percentage of the population under 20 will be smaller than now.

*Questions 23 - 25*

*Complete the notes below with words taken from Reading Passage 2.*

*Use **NO MORE THAN TWO WORDS** for each answer.*

*Write your answers in boxes 23-25 on your answer sheet.*



## READING PASSAGE 3

*You should spend about 20 minutes on* ***Questions 26-38*** *which are based on Reading Passage 3 on pages 17 and 18.*

# "The Rollfilm Revolution"

The introduction of the dry plate process brought with it many advantages. Not only was it much more convenient, so that the photographer no longer needed to prepare his material in advance, but its much greater sensitivity made possible a new generation of cameras. Instantaneous exposures had been possible before, but only with some difficulty and with special equipment and conditions. Now, exposures short enough to permit the camera to be held in the hand were easily achieved. As well as fitting shutters and viewfinders to their conventional stand cameras, manufacturers began to construct smaller cameras intended specifically for hand use.

One of the first designs to be published was Thomas Bolas's 'Detective' camera of 1881. Externally a plain box, quite unlike the folding bellows camera typical of the period, it could be used unobtrusively. The name caught on, and for the next decade or so almost all hand cameras were called 'Detectives'. Many of the new designs in the 1880s were for magazine cameras, in which a number of dry plates could be pre-loaded and changed one after another following exposure. Although much more convenient than stand cameras, still used by most serious workers, magazine plate cameras were heavy, and required access to a darkroom for loading and processing the plates. This was all changed by a young American bank clerk turned photographic manufacturer, George Eastman, from Rochester, New York.

Eastman had begun to manufacture gelatine dry plates in 1880, being one of the first to do so in America. He soon looked for ways of simplifying photography, believing that many people were put off by the complication and messiness. His first step was to develop, with the camera manufacturer William H.Walker, a holder for a long roll of paper negative 'film'. This could be fitted to a standard plate camera and up to forty-eight exposures made before reloading. The combined weight of the paper roll and the holder was far less than the same number of glass plates in their light-tight wooden holders. Although roll-holders had been made as early as the 1850s, none had been very successful because of the limitations of the photographic materials then available. Eastman's rollable paper film was sensitive and gave negatives of good quality; the Eastman-Walker roll-holder was a great success.

The next step was to combine the roll-holder with a small hand camera; Eastman's first design was patented with an employee, F. M. Cossitt, in 1886. It was not a success. Only fifty Eastman detective cameras were made, and they were sold as a lot to a dealer in 1887; the cost was too high and the design too complicated. Eastman set about developing a new model, which was launched in June 1888. It was a small box, containing a roll of paper-based stripping film sufficient for 100 circular exposures 6 cm in diameter. Its operation was simple: set the shutter by pulling a wire string; aim the camera using the V line impression in the camera top; press the release button to activate the exposure; and turn a special key to wind on the film. A hundred exposures had to

be made, so it was important to record each picture in the memorandum book provided, since there was no exposure counter. Eastman gave his camera the invented name 'Kodak' - which was easily pronounceable in most languages, and had two Ks which Eastman felt was a firm, uncompromising kind of letter.

The importance of Eastman's new roll-film camera was not that it was the first. There had been several earlier cameras, notably the Stirn 'America', first demonstrated in the spring of 1887 and on sale from early 1888. This also used a roll of negative paper, and had such refinements as a reflecting viewfinder and an ingenious exposure marker. The real significance of the first Kodak camera was that it was backed up by a developing and printing service. Hitherto, virtually all photographers developed and printed their own pictures. This required the facilities of a darkroom and the time and inclination to handle the necessary chemicals, make the prints and so on. Eastman recognized that not everyone had the resources or the desire to do this. When a customer had made a hundred exposures in the Kodak camera, he sent it to Eastman's factory in Rochester (or later in Harrow in England) where the film was unloaded, processed and printed, the camera reloaded and returned to the owner. "You Press the Button, We Do the Rest" ran Eastman's classic marketing slogan; photography had been brought to everyone. Everyone, that is, who could afford $25 or five guineas for the camera and $10 or two guineas for the developing and printing. A guinea ($5) was a week's wages for many at the time, so this simple camera cost the equivalent of hundreds of dollars today.

In 1889 an improved model with a new shutter design was introduced, and it was called the No. 2 Kodak camera. The paper-based stripping film was complicated to manipulate, since the processed negative image had to be stripped from the paper base for printing. At the end of 1889 Eastman launched a new roll film on a celluloid base. Clear, tough, transparent and flexible, the new film not only made the roll-film camera fully practical, but provided the raw material for the introduction of cinematography a few years later. Other, larger models were introduced, including several folding versions, one of which took pictures 21.6 cm x 16.5 cm in size. Other manufacturers in America and Europe introduced cameras to take the Kodak roll-films, and other firms began to offer developing and printing services for the benefit of the new breed of photographers.

By September 1889, over 5,000 Kodak cameras had been sold in the USA, and the company was daily printing 6-7,000 negatives. Holidays and special events created enormous surges in demand for processing: 900 Kodak users returned their cameras for processing and reloading in the week after the New York centennial celebration.

*Questions 26 - 29*

Do the following statements agree with the views of the writer in Reading Passage 3?

*In boxes 26-29 on your answer sheet write*

| | |
|---|---|
| ***YES*** | *if the statement agrees with the views of the writer* |
| ***NO*** | *if the statement does not agree with the views of the writer* |
| ***NOT GIVEN*** | *if there is no information about this in the passage* |

**26** Before the dry plate process short exposures could only be achieved with cameras held in the hand.
**27** Stirn's 'America' camera lacked Kodak's developing service.
**28** The first Kodak film cost the equivalent of a week's wages to develop.
**29** Some of Eastman's 1891 range of cameras could be loaded in daylight.

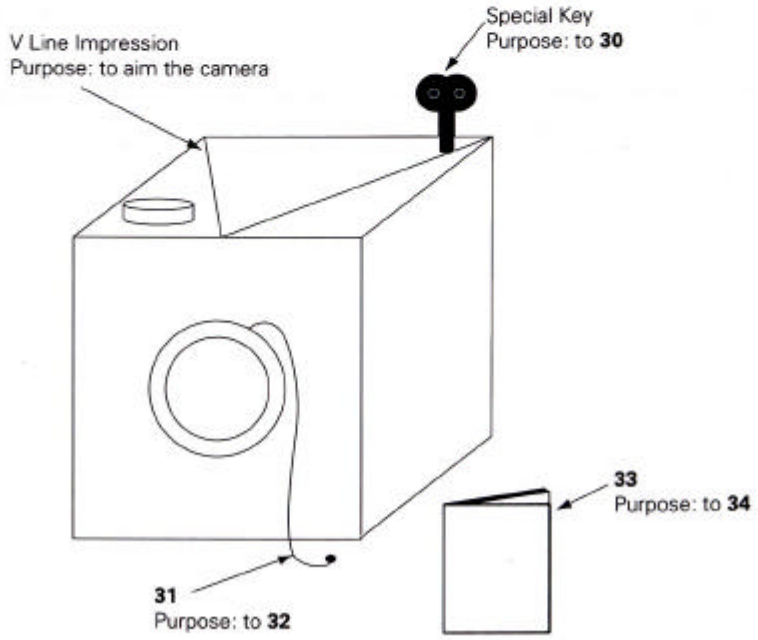
*Questions 30 - 34*

*Complete the diagram below.*

*Choose **NO MORE THAN THREE WORDS** from the passage for each answer.*

*Write your answers in boxes 30-34 on your answer sheet.*

**camera**



*Questions 35 - 38*

*Complete the table below.*

*Choose **NO MORE THAN THREE WORDS** or **A NUMBER** from the passage for each answer.*

*Write your answers in boxes 35-38 on your answer sheet.*

| Year | Developments | Name of person/people |
|---|---|---|
| 1880 | Manufacture of gelatine dry plates | **35** |
| 1881 | Release of 'Detective' camera | Thomas Bolas |
| **36** | The roll-holder combined with **37** | Eastman and F.M.Cossitt |
| 1889 | Introduction of model with **38** | Eastman |

## ACADEMIC READING – ANSWER KEY

### MARKING GUIDELINES

**NOTE TO MARKERS**

- Each marker must have a reference copy of the Question Paper.
- Please use a pencil for marking.
- Shade the correct box on the answer sheet for each question in the ✔ or ✘ columns.
- Answers provided on the Answer Key are exhaustive.
- Answers may be written in upper or lower case.

| | | |
|---|---|---|
| Brackets | ( ) | denote a word or words that are not necessary to the answer |
| Slash | / | denotes alternative words/phrases within an answer |
| Double Slash | // | denotes an alternative answer form |

**EACH QUESTION CORRECTLY ANSWERED SCORES 1 MARK.** **TOTAL MARKS – 38**

### YOUR SCORE ON ACADEMIC READING

Make sure you have read 'Interpreting Your Scores' on page 7.

| | |
|---|---|
| Scores 25 and above | If you have strictly followed the guidelines on pages 3 and 4 you are likely to get an acceptable score on the IELTS Academic Reading Module under examination conditions, but remember that different institutions will find different scores acceptable (see point 5 on page 7). |
| Scores 17 – 24 | You may not get an acceptable score on the IELTS Academic Reading Module under examination conditions and we recommend that you should think about having more lessons or practice before you take IELTS. |
| Scores 0 – 16 | You are highly unlikely to get an acceptable score on the IELTS Academic Reading Module under examination conditions and we recommend that you spend a lot of time improving your English before you apply to take IELTS. |

## ACADEMIC READING – ANSWER KEY

Each question correctly answered scores 1 mark.

**Reading Passage 1 Questions 1 – 11**

1 E
2 F
3 1900 BC **AND** AD 1500 *(both required for 1 mark.)*
**NOT** 1900 **AND** 1500
4 (according to/from) geological evidence/signs/data
5 (the) local population // inhabitants
6 500/five hundred feet/ft
7 evacuated
8 8.32 (am/in the morning)
9 (nearly) 200 square miles
**NOT** 200 miles
10 (a) quarter/ ¼ of (a) cubic mile
11 C

**Reading Passage 2 Questions 12 – 25**

12 iv
13 viii
14 v
15 ii
16 i
17 YES
18 NO
19 NOT GIVEN
20 NO
21 YES
22 YES
23 organisational outcomes
24 individual outcomes
25 absenteeism

**Reading Passage 3 Questions 26 – 38**

26 NO
27 YES
28 NO
29 NOT GIVEN
30 wind on (the) film
31 (a) wire string
32 set (the) shutter
33 (the) memorandum book
34 record each picture/exposure
35 (George) Eastman
36 1886
37 (a) (small) hand camera
38 (a) new shutter (design)